The Journal of the American Medical Association

Published under the Auspices of the Board of Trustees

VOLUME LIII CHICAGO, ILLINOIS, OCTOBER 2, 1909 NUMBER 14

Address

MENTAL ALIENATION IN WOMEN AND ABDOMINO-PELVIC DISEASE

CHAIRMAN'S ADDRESS IN SECTION ON OBSTETRICS AND DISEASES OF WOMEN AT THE SIXTIETH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, 1909

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DETROIT

At the opening of this Section for 1909 I desire to express to you my sincere appreciation of the honor which you have done me in continued confidence during the past years. It comes to few men to have served continuously a section in every capacity within that Section's gift, and now in relinquishing active office after so long a period, I feel that my being here is due rather to your kindly tolerance than to anything that I may have done to merit it.

This Section, from the small and inconspicuous gathering which annually took place before the reorganization of the Association, has now become a factor in the world's work, and its transactions present a volume on special subjects in scientific value second to none. The papers and discussions emanating from this Section have greatly enriched the literature of gynecology and obstetrics, and it only remains for us to maintain the high standard which has been reached in our deliberations.

At the turn in the lane we sometimes pause to look back along the way that we have come, observe the windings of the path, the roughness of the ground and the hard places that have been crossed, and, perhaps, with Stevenson, we "draw back and shade our eyes before the picture dawns on us in full breadth and outline."

After more than a quarter century of active interest in the nervous and mental disorders of women associated with pelvic disease, I may, perhaps, be permitted at this time again to refer briefly to a subject regarding which I have spoken much, and review some of the things historical and some which have passed under observation during the period mentioned, and for which I may claim, at least in some degree, responsibility.

In his book on "Mind and Body" Alexander Bain states that "the entire bodily system, though in varying degree, is in intimate alliance with mental function. To confine our study to the nervous substance would be to misrepresent the connection, and the knowledge of that substance, however complete, would not suffice for the solution of the problem." But this idea was almost as old as the hills when Bain wrote the words quoted, and was familiar centuries before the Christian era, for Hippocrates and his followers understood the so-called "sympathetic insanities," while at a nearer time the man out of the tombs exemplified, if he did not put into words, a fact now familiar to all, the relation of somatic conditions to the delusion of the insane.

Acting on the material facts which medicine had separated from the dim uncertainties of philosophy and metaphysics, the ancients appear to have cared for and respected their mentally deranged with a greater solicitude and consideration than was accorded the insane by subsequent generations, for during the Middle Ages, dark ages indeed for the unfortunates who bore the blotted brain, the subject of mental disorder was looked on as a sore on the fair face of humanity and a shame and disgrace to both family and state. Cruelty and brutality obtained to extreme degree, and the mentally sick, like Shimshon of old, was often the butt of the jester and forced to make sport for his hardened keepers and a degraded populace.

Such was the status of the insane up to the latter part of the eighteenth century, when Pinel, most courageous and enlightened of his time, struck off the fetters from the inmates of Bicêtre (1792) and inaugurated a new era in the treatment of mental disorders. From this time on, increasing interest in the welfare of the insane developed, the study of psychiatry received an impetus and a knowledge of forms and the classification of mental diseases became more exact and thorough.

From the present-time point of view, it seems strange that, with all the philanthropic efforts directed toward the insane and the renewed interest created in the study of the morphology of mental diseases, the influence of somatic conditions should have been so almost completely ignored. The psychiatrist of that day seemed to have forgotten that, as Cowles remarks, "In the study of mental diseases it is important to find their true place in relation to other pathologic conditions," and that "as a physician he must treat the whole body," for "psychiatry belongs to general medicine, and mental disease, like bodily disease, is not an entity nor an agency, but the result of normal function acting under abnormal conditions," etc.

It was not, however, until the diseases of women had been separated from medicine as a specialty that interest in their possible relationship to insanity began to be manifested. And it must here be remarked that the inception of this interest did not arise with the alienist who, busied with his large material, was seeking for the cause and origin of mental disorder, but with the gynecologist who noted the effect on the nervous system and mind of puberty, the menopause, and childbirth in certain individuals and observed the mental breakdowns resulting from ill-conducted lives, to which was added the continued irritation of abdomino-pelvic disease. He it was who drew attention to the possibilities of cause and effect in this class of cases.

In 1854, fired by an enthusiasm begot of experience with pelvic disease in the sane, Dr. Horatio B. Storer sought to carry his investigations forward in instances of unbalanced mind, and in a resolution offered before the American Medical Association, effected the appointment of a special committee to look into the relationship between insanity and the disorders peculiar to women. Unfortunately for all concerned, this proposal met with cold reception from those whom it would be supposed would be mostly directly interested; asylum superintendents became at once jealous of their so-called rights and the invasion of the gynecologist into the realm of psychiatry and refused to cooperate, so that, after an existence of several years, the committee was finally discharged, having accomplished nothing. A number of years then elapsed before a second attempt was made to study this important subject.

Somewhere about 1878, at the request of the superintendent, Dr. A. J. C. Skene undertook some gynecologic work in the Kings County Asylum at Flatbush, N. Y. The work accomplished was of the highest order, and it is to be regretted that it could not have been longer continued until more definite results had accrued from the observations made and our knowledge along this line thus augmented.

More than twenty years ago, when I began my work at the Eastern Michigan Asylum, no systematic efforts were being made to ameliorate the condition of female patients in our institutions for the insane suffering from abdomino-pelvic disease, or to place on a sound basis the knowledge of the influence which such disorders might exert on the causation and progress of mental troubles. Advancement in general medicine had by this time paved the way to a more enlightened order of things so that, although there was still opposition and criticism, the path was made easier and the way was more direct.

To-day, as the result of these tentative beginnings, there is hardly an asylum of size in this country where either a consulting gynecologist or a member of the staff, set apart for this duty, may not be found.

And there is one particular reason for this, a reason which I have persistently urged, and to which both laity and the profession have now become alive. If the state obligates itself to the care of the insane in the way of feeding, clothing, protecting and housing, it can not do these things and refuse its unfortunate charges relief from physical suffering; it is morally bound to care for bodily ailments while seeking the alleviation of mental distress.

But the question may be asked: If amelioration of bodily suffering has become a part of the asylum's function, what has been achieved thereby as regards the mental condition of the patient, and what are the end-results in the matter of mental cure? The answer may be found in the reports of asylums where this work is most actively carried on, and in the literature of insanity relating to this subject.

Summarized, we may recount a few of the conspicuous results that have obtained during the past two decades. We have added to our knowledge regarding the relationship existing between mind and body; we know more at present than was formerly known, that, while mind may exert a remarkable influence over the functions of the various internal organs, the converse is also true, morbid state of any viscus often aggravating the existing mental malady, or even lead to the ultimate downfall of the greatest intellect. Head, in his Goulstonian Lectures for 1901, has shown that physical pain from visceral disease is productive of decided psychic manifestations, and I and others have demonstrated that relief from suffering brings about a mental palliation often otherwise unattainable.

The frequency with which abdomino-pelvic disorders exist in insane women has been determined and has led to a more careful and systematic examination of the female patients in our institutions for those conditions which the mental malady may overshadow in its manifestations. My own investigations have shown that about 81 per cent. of insane women suffer from some form of pelvic or abdominal disorder, and these statistics do not differ materially from those of most other observers, Hobbs and Isabella Davenport alone reporting so large a percentage as 93.

The frequency with which postoperative insanity of a more or less permanent form is likely to occur following surgical intervention in, particularly, diseased abdominal and pelvic viscera, and the relationship and frequency of abnormal mentation to pregnancy, eclampsia and the puerperium has been shown. Postoperative insanity is of rare occurrence and satisfactory statistics can be obtained only from asylum records. From a careful investigation Dewey concludes that the ratio of cases of mental alienation from this cause going to public institutions is less than 1 per 1,000, and my own observations quite accord with this. Such statistics, however, are misleading and do not represent the actual number of cases of insanity resulting from surgical operations, since many instances are undoubtedly of an ephemeral nature, lasting but a few days or weeks, and, being cared for at home or in a general hospital, are not made public. Bearing on this point, the investigations of Sears published some years ago are of interest. The preponderance of mental disorders following operations appears to lie with women, since mental breakdown is more likely to result from operations on the pelvic organs than on other parts of the body, the eye alone excepted. Excluding the surgery of the sexual organs, women do not appear to be more liable to insanity than do men. Dewey and others direct attention to the fact that the mental condition of the patient prior to operation is not sufficiently taken into consideration, and that in many instances insanity is either actually present or the patient it at the border line before the surgical procedure is undertaken. As regards insanity following eclampsia, my investigations published in 1895 indicate that, for this country at least, it is probably such an infrequent sequel that eclampsia hardly deserves consideration as an etiologic factor. Of 1,271 insane patients, the puerperal condition, aside from eclampsia, was ascribed as the existing cause of the mental disorder in 108 instances. According to Kraepelin, childbed is responsible for the insanity of 6.8 per cent. of all women admitted to our institutions, while Peterson says that in about 10 per cent. of insane women the mental disturbance has its origin at the epoch of reproduction. In this connection Hobbs has pointed out that in the majority of these mental states septic infection, immediate or remote, is the responsible agent.

It has been more clearly shown that the hallucinations and delusions of the insane are not always the figment of a disordered brain but are frequently dependent on intra-abdominal or pelvic lesions. In 1896 I pointed out, in a series of illustrative cases, that these mental phenomena are often the expression of somatic peripheral irritation. Hallucinations from such causes may even develop in the sane, as witness a case reported by White, in which the removal of two apparently healthy tonsils relieved the patient of a fancied foul

breath. This was undetectable by others, but, in spite of absolutely healthy organs and a normal mentality, was the cause of much mental distress to the patient. Head found that hallucinations of vision, hearing and smell may appear in phthisis, heart disease and aortic aneurism. My observations go to show that delusions may develop from external or visible bodily conditions, from easily detected visceral disorders, and from obscure abdominal and pelvic states. The delusions of micromania may often have foundation in some such perversion of abdominal sensory impression, the erroneous judgment excited by visceral adhesion, a tumor or ovarian irritation, and may give rise to the impression that the intestines have been removed or are absolutely closed up, as in a case cited by Frederick Peterson. "It is further demonstrated," says Stoddart, "that all these mental symptoms arise in association with severe prolonged pain resulting from disease of the viscera referred to the body wall," and again, "they do not occur in the absence of pain." Further investigation may show that still more of these manifestations are really based on physical causes.

Finally, as to the end-results and the curability of insanity through operative measures: It has always been a popular notion, fostered no doubt by indiscreet and thoughtless observations on the part of the profession, that insanity in women is most frequently the direct result of a diseased condition or perverted function of the organs of generation, and hence, it has been believed, that the restoration of these parts to a normal state, either by repair of defects or the removal of pathologic structures, would lead to renewed mental health. To those who have had the largest opportunity to study these questions, however, experience has shown that this is not altogether true. While, as has been pointed out, abdominal and pelvic disease is found to be present in a large percentage of insane women, it is possible that the proportion is no larger than obtains among the sane. The latter, however, may be for years the subjects of great suffering, discomfort or distress without the local disorder producing the slightest effect on the action of the mental machinery. It is too generally forgotten by those who make extraordinary claims as to the curability of insanity through the removal of the particular local flaw, that in the insane the mental malady has, in the majority of instances, an unstable nervous organization as its substructure. It has been put down that the proportion is about 1 to 300, this varying with races and countries (Peterson). In the mentally diseased the frequency rôle of heredity, including "hereditary equivalents," is variously estimated at from 30 to 90 per cent., and even in the functional psychoses it may amount to as high as 70 per cent. (Krauss).

If we also take cognizance of the disastrous effects of alcoholism, syphilis, tuberculosis and the strenuosities of modern life, we have an alarming array of etiologic influences constantly threatening mental integrity. In the unstable individual slight causes may, perhaps, be quite sufficient to overcome the mental equilibrium, but in those with a clean record something more than the abdominal or pelvic disease must account for the psychic overthrow. After persistent and patient investigation of cases in private, hospital and asylum practice, and the study of the reports of others, I am still unconvinced that local disorders, exclusive of septic or toxic conditions, ever result *per se* in mental dethronement. Given an ordinarily strong and healthy woman and subject her to unusual and prolonged mental strain, anxiety and loss of sleep, together with bodily over-fatigue and stress, or to excesses which undermine the general health and constitution, and a dormant defect, which previously produced no symptoms, may make itself manifest and mental breakdown result from the combination of processes. Hence the uterine, ovarian or other disease, through its newly acquired power of pain and its influence on the nutrition and functions of the body, becomes an important factor in producing mental depression, which, in turn, may ultimately lead to insanity. Of itself the pelvic or other morbidity is but a phase and would have no effect had not the preceding physical and psychic conditions rendered the patient incapable of resisting its action. Such cases are particularly amenable to relief and cure through proper moral and physical treatment, supplemented by the surgical removal or correction of the local lesion. This also applies to many instances of puerperal insanity the result of infection, inflammation or physical prostration from undue demands made upon the organism unequal to the strain.

Again: "It is not unusual to find," says Mabon, "that insane patients, while convalescing from surgical operations, at times give evidence of mental improvement, going on, in some instances, to complete recovery, and this in instances in which the latter could hardly be expected. Sometimes this outcome may be due to the shock of the operation; in other cases the mental effect which the operation itself produces in the subject is to be credited with the mental improvement—the explanation being that we substitute a healthy for an unhealthy mental introspection; while in still others the increased personal attention received after the operation, together with the changed environment, forms the medium through which mental improvement results."

But though we are sure of a small percentage of mental cures following surgical operations on the insane, I still continue to maintain that we have no right, either as surgeons or humanitarians, to place the positive relief from physical suffering alongside the uncertain relief of the mental malady, but that whatever may be the outcome as regards the psychic disorder, relief and cure of somatic suffering is imperative, and this should be our constant thought and purpose.

But whether a cure of the insanity is effected or not, it is certain that improvement in the metal condition is likely to supervene from the removal of the focus of irritation; the subject is rendered more comfortable and therefore becomes more tractable, and through this is often changed from an untidy, refractory patient to a clean, industrious and orderly individual.

In the foregoing remarks I have attempted to touch on some of the conspicuous results that have followed from the investigation of insanity in its relation to the abdomino-pelvic disorders in women during the past twenty years. In the discussion I have credited the alienist's present point of view rather than that of the gynecologist, lest I be accused of bias; and whatever has been quoted has been set down largely in the psychiatrist's own words. If the gynecologist was once thought to be unwisely urgent and filled with over-zeal, the results of his good and persistent endeavors have won their reward and are today reflected in the changed attitude of students of mental disease. And surely such a showing can not be disregarded or attributed to over-enthusiasm on the part of those engaged in the work, for it can hardly be asserted that the alienist and the surgeon, together striving toward one end in harmonious effort, can both be deceived in so carefully wrought out and important a matter.

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Original Articles

THE CHOICE OF OPERATIONS FOR RETRODISPLACEMENTS OF THE UTERUS *

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In presenting this subject for consideration, I am not unmindful of the fact that much has been written and said on it, and that many of the members of this Section have worked out operations of their own to correct a retrodisplacement of the uterus. Where there is such a diversity of opinion, one must conclude that no one operation gives universal satisfaction and that the factors entering into the cause of retrodisplacements are not generally understood.

It is with the hope of bringing out a thorough discussion of this subject that I present this paper. This question will be settled aright in time as other surgical questions have been in the past, and the proper operations selected.

In the first place we must acknowledge—although many physicians of Europe and America dispute these points—that a woman who has a simple retrodisplacement of the uterus may suffer because of the displacement, and that a retrodisplacement predisposes the patient to disease of the uterus or adnexa. When a displacement is associated with disease of the tubes or ovaries nearly all agree that something should be done to rectify the trouble.

POSITION OF THE UTERUS

The uterus is partly suspended and partly held in position by ligaments. Why its normal position is maintained is not universally understood.

The uterus that causes no discomfort to the patient is usually anteverted, slightly flexed, and placed at right angles to the vagina. The fundus is supported by a soft cushion, the bladder, and held forward by the restraining round ligaments and their peritoneal coverings, also by the uterosacral ligaments, which prevent prolapse. The broad ligaments prevent permanent lateral displacements. The intra-abdominal pressure and intestines assist in holding the fundus forward and the counter-pressure of the perineal body makes the normal position possible.

The position varies with the condition of the bladder and rectum. The organ is freely movable and its position can be temporarily changed by manipulation. It moves with each respiratory act. With the broad ligaments it divides the pelvis into two unequal portions, viz., a shallow anterior part containing the bladder and a deep posterior portion containing coils of intestines.

CAUSES OF RETRODISPLACEMENTS

In the normal state all the supports of the uterus act in harmony during local or general muscular exercise. In diseases this synchronous action is disturbed. In many individuals a retrodisplacement is coincident with a general disturbance of the equilibrium of the abdominal and pelvic organs, and under such circumstances it increases the possibility of a visceroptosis. A general visceroptosis, on the other hand, aggravates the displacement.

The factors which disturb the harmonious action and arrangement of the uterine supports may be enumerated as follows:

1. A laceration of the cervix or disease resulting therefrom.
2. An endometritis or metritis.
3. Increased weight of the uterus.
4. Cervical constriction, resulting in congestion.
5. Tumors of the uterus.
6. Senile or small uterus.
7. Diseased tubes.
8. Diseased ovaries.
9. Congenital weakness of supports.
10. Lacerated perineum.
11. Inflammatory diseases of the pelvic organs or peritoneum.
12. Increased intra-abdominal tension.
13. Relaxed abdominal muscles.
14. Prolapsed intestines or other viscera.
15. Constriction at the waist-line.
16. Constipation and straining.
17. Jars or traumatism, weakening the supports or disturbing the equilibrium.
18. Temporary and habitual partial displacements from bladder, overdistention, etc.
19. Overdistention of rectum and pressure upon the temporarily displaced fundus.
20. Adhesions pulling the uterus out of place.
21. Improper exercise, poor food and lack of hygienic surroundings.

When a uterus becomes temporarily retrodisplaced—and this condition occurs at short intervals—the supports weaken. The forces which in the normal state help to hold the uterus forward, viz., the intra-abdominal tension and pressure of the intestines, now are factors in perpetuating the displacement. The ligaments stretch more and the fundus is pushed into the deep posterior pit and a pronounced retroversion and flexion often occurs.

Could we but recognize the incipient stages of this progressing condition and know every factor entering into the trouble, much could be done to avoid a permanent displacement.

SYMPTOMS

Occasionally unmarried women especially do not know to what their symptoms are due until a physician makes a diagnosis of a retrodisplacement.

It is frequently the case that the displacement alone is not the cause of the trouble, but the associated disease of the tubes or ovaries. Many young women have retrodisplacements and develop disease of the tubes or ovaries later because of this displacement.

The symptoms are dependent on the degree of retrodisplacement, the character of the infection, if any, and the associated conditions, also the age and social status of the patient.

That simple retrodisplacements do cause trouble I am quite certain, or at least I will state that in many instances in which the retrodisplacement alone has been corrected the symptoms have disappeared. Symptoms are modified by any condition which may disturb the harmonious relationship of the organs or assist in producing the retrodisplacement, as enumerated above.

In a retrodisplacement some of the special complaints which women make are:

1. Backache.
2. Bearing-down pains.
3. Tenderness of uterus.
4. Constipation.
5. Dysuria.
6. Dysmenorrhea.
7. Menorrhagia.
8. Metrorrhagia.
9. Neurasthenia.
10. Sterility.
11. Leucorrhea.

* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Sixtieth Annual Session, held at Atlantic City, June, 1909.

If cases of anteflexion do cause trouble at times, why should not a retrodisplacement in which there is the possibility of the uterus falling so much lower in comparison? The uterus being below the normal circulatory level, the venous return flow is impeded. Congestion, endometritis and metritis follow as natural consequences.

In any disease of the ovaries, tubes, or in appendicitis with peritonitis a retrodisplaced uterus greatly augments the suffering. The fundus and adnexa become congested and are crowded as a mass into the bottom or apex of the pit, pressing on and adhering to one another. A loop of the intestines is often intimately associated with this mass. The destruction of tissue is then greater and functions of the organs are much interfered with.

Many an old woman will give a history of displacement of the uterus from which she had suffered from girlhood. It had troubled her at menstruation, at defecation and at micturition, the peace of mind and body being so disturbed as to make life unbearable, and the condition ended in greater disturbances of bladder and bowel, with complete uterine prolapse. It had been the bane of the woman's life and did not even disappear at the "change of life," as often predicted, but followed her during her declining years. Countless office treatments have been given and numerous instruments of torture have been employed to overcome troublesome retrodisplacements, with little benefit, and often much harm, so there is a crying need for a sure and certain cure by a safe and sane method.

OPERATIVE TREATMENT OF RETRODISPLACEMENTS

In considering the surgical treatment for retrodisplacements it is necessary to understand all the factors entering into the maintenance of the normal position, and also to recognize what one or more conditions present may have a causative relation to the misplaced organ.

The success of an operation for the replacement of the uterus will depend largely on the interpretation of these factors and the attention given them by the individual operator. No operation will prove its real worth or give the desired relief should a general relaxed condition of the abdominal muscles with visceroptosis or a lacerated perineum go unheeded, or if any other pelvic or abdominal lesion exerting any influence on the position of the uterus remain untreated.

All sorts of operations have been performed in the past for the cure of retrodisplacements, many without regard for the future comforts of the patient or for the proper functions of the pelvic organs. The greater proportion of them looked all right at the time of the operation, but statistics and facts have shown that many have been failures. A few have stood the test of time, but only when properly selected and employed, with due reference to all other associated conditions.

The operation of ventrofixation and suspension, as introduced in the United States by Howard Kelly, was once quite popular and is to-day performed by a number of operators. It is true of this operation, as well as of any other, that when performed improperly and by incompetent men bad results are often to be expected. This operation has given a great many women comfort and ease. On the other hand, it has resulted in much harm and unnecessary suffering for others.

When properly performed on women past the menopause in whom there is a call for a rapid operation and for the suspension of the organ for retrodisplacement and prolapse, the results will be quite satisfactory. Also, in women who have the tubes or ovaries removed, and if a septic condition exists, at the time, there is less danger of complications in simply stitching the uterus to the peritoneum. Other excuses for its employment might exist in small, round ligaments, or in cases in which the uterus is to be held forward temporarily after an operation for appendicitis, fibroid, salpingectomy, or cysts of ovaries.

I myself have seldom selected this operation, because of the fact that there are more desirable methods of holding the uterus up. By this procedure the uterus is held in a fixed unnatural position and by an unnatural ligament. It seems like a makeshift operation. It is at variance with the principles governing the normal position of the uterus. It causes disturbances during pregnancy and makes labor difficult at times. It favors adhesions of the bowels and invites obstruction by the central ligamentous band.

Alexander's operation is not a very popular one today because of the fact that failures have been numerous and the operation has been improperly applied or performed. The round ligaments, especially the proximal half, are sufficiently strong to act as good supports when there is not a constant strain placed on them.

Any operation which manufactures or secures good supports for the uterus will not be ultimately successful if there is a constant strain on these supports. Failure will result as the tissues will stretch; therefore it is necessary to bring about the normal relationship of the uterus and surrounding parts, utilizing all the normal supports for the purpose and distributing the intra-abdominal pressure in a way to favor the maintenance of that normal position, at the same time correcting any associated disease acting as a causative factor. At one time this operation promised to be the panacea for women with retrodisplacements. There is no question as regards its efficacy in certain cases and it is a scientific and logical operation to perform in cases in which no disease exists within the abdomen or pelvis that requires a laparotomy.

In the past the enthusiastic advocates of this operation employed it in all cases, even going so far as to open up back of the uterus to separate adhesions due to diseased tubes and ovaries, packing the space and shortening the round ligaments extraperitoneally. The absolute failure to relieve the symptoms in all such cases and in many others caused the operation to fall into disuse. I have in a number of instances enlarged the opening to remove a diseased appendix or to resect a tube or ovary where no adhesions existed with good results. I believe it is best to draw the peritoneum up through the opening and close off the sac from the peritoneal cavity, as it makes a better support to include the peritoneum, especially the anterior fold.

The Webster operation finds a great many advocates. I have employed it in selected cases. It has the same objections as any other operation which does not permit the use of the strongest portion of the ligamentous tissue. It also produces a considerable constriction of the body of the uterus by the back-folding, clamping method of the ligaments. I am not sure but that much interference with pregnancy will be found to follow this operation in the future. It also introduces an extra suture line for possible complications. It is of advantage where a sustaining force is required for the ovaries and tubes, and, especially in cases where a raw surface posterior to the uterus exists, it protects this surface from possible adhesions.

Dr Coffey[1] of Portland, Ore., in a well illustrated article published October, 1908, describes an operation of his own for retrodisplacements. It consists in folding the round ligaments downward in front of and lateral to the fundus and refolding them up to the horn of the uterus, making a tuck in the broad ligament over these folds. He claims perfect results. It is a rational operation in certain cases.

The additional time consumed in the operation and the fact that the weakest portion of the round ligaments remain as the supports, the largest and strongest portions being used up, the additional amount of traumatism and suture line left within the tissues and abdomen, would naturally favor adhesions between these areas and the bowel. In septic cases there may be an additional risk of infection and general adhesions. Theoretically it would interfere with the natural enlargement of the uterus during pregnancy also, as there remain two folds of the ligament and one of the peritoneum to prevent the natural enlargement; pain or miscarriages might possibly result.

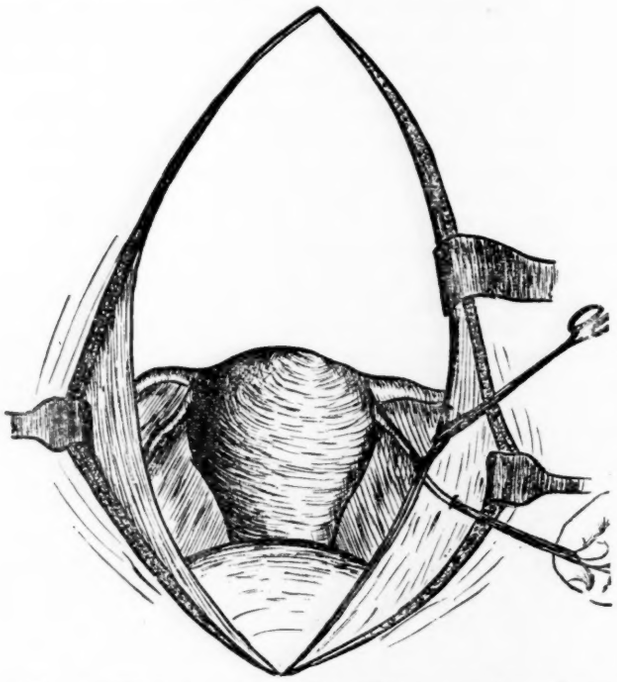

Fig. 1.—First step of modified Gilliam operation; forceps dragging round ligament through fascia opposite internal abdominal ring.

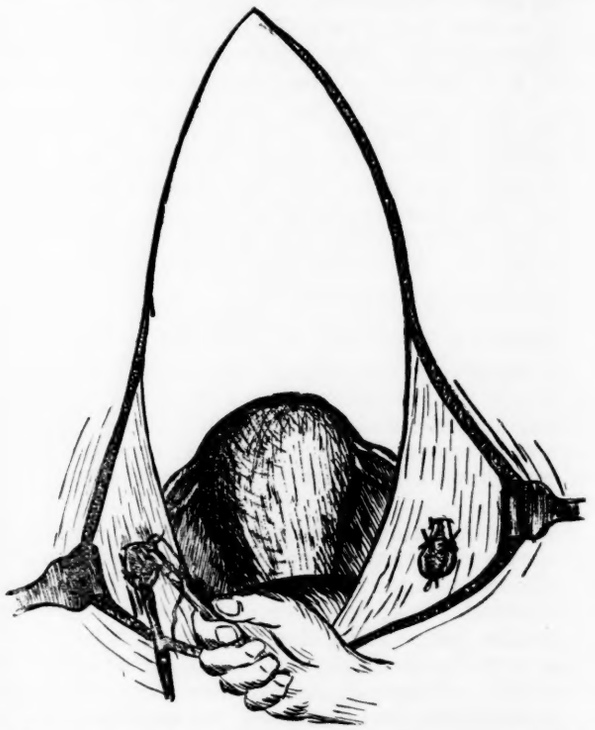

Fig. 2.—Second step of modified Gilliam operation; sutures being placed and ligaments fastened fan-shaped on opposite sides to fascia of external oblique.

There are certain well-defined cases of lengthening of the uterosacral ligaments, as when there is some prolapse of the uterus, in which a shortening of these structures favors a more speedy return to health and lessens the possibility of prolapse.

The ligaments can be shortened from above or below; I believe best from above, as we can explore the abdomen and pelvic contents at the same time.

These ligaments should be shortened in certain cases where any other operation is performed for a retrodisplacement to insure good results if they are weak.

Any operation which folds the round ligaments on themselves within the pelvis, as in the Mann operation, does not offer the same support for the uterus, as it may be very heavy and partly deformed, flexed or bent on itself. Relapses may be frequent; the weak end of the ligaments are not strengthened; in fact, the additional constant restrain put on them by shortening may weaken the external thin ends.

I would offer the additional criticism on the Mann operation that there is, as in similar operations, the exposure of a suture line within the abdomen which may provoke adhesions. The same objections could be offered to the Goffe operation.

The operation of fixing the round ligaments and covering to the parietal peritoneum near the internal abdominal ring is a much more successful operation than many, as it allows a broad approximation and, if the loose distal portion of the ligament is tacked up to the abdominal wall there is an elevation of the pelvic peritoneum as well. It is not employed as often as it should be. I have been pleased with it in special cases. I believe it is far superior to the operations which leave the weak external end for support or in which an extra and unnatural ligament is created. The operation can be done through the median incision and quickly, but furnishes a chance for adhesions along the suture line. The operation of vaginal fixation as employed by Müller has not appealed to me, as it makes too radical a change in the position of the uterus and in young individuals would certainly not be indicated.

Ferguson was one of the first operators (1899) to recognize the importance of correcting the disease of the adnexa and explore the abdomen for other lesions before correcting the retrodisplacement of the uterus. His operation was a step in the right direction, but has been replaced by the Gilliam operation or its modifications to-day. The typical Gilliam operation as first planned by its originator made too direct a pull on the uterus and left an unguarded depression between the normal and artificial exit of the ligaments inviting intestinal obstruction.

The modification which I have at last worked out consists in a dissection of the skin back to a point oppo-

1. Coffey, R. C.: Principles on Which the Success of Surgical Treatment of Retrodisplacements of the Uterus Depends, Surg. Gynec. and Obst., October, 1908.

site the internal abdominal ring, passing a curved forceps through the fascia at this point between the folds of the broad ligament to within an inch and a half of the horn of the uterus, catching the ligament, which, together with the peritoneal covering, is brought out on the abdominal wall (Fig. 1), spread on the fascia in fan shape and anchored by three or four interrupted chromic catgut sutures (Fig. 2).

The anterior fold of the peritoneum can be pulled out to any extent, making any tension desired. In young women I am in the habit of making a transverse curved skin incision at the border of the pubic hair line and a longitudinal incision through the underlying tissue.

I am always careful to observe the condition of all the organs within the abdomen and pelvis and to correct any abnormal condition possible at the time. A lacerated cervix, or perineum or cystocele must necessarily be overcome if present, usually after the abdominal work.

The after-care of these cases is important. The general visceroptosis may be corrected by a proper long straight-front corset; the intra-abdominal tension by correcting the diet and regulating the bowels, treating a menorrhagia or metrorrhagia by rest and medication; and the inflamed or congested cervix by hot and astringent douches.

When all the associated or interdependent diseases and symptoms are thus carefully managed the results are all that could be desired.

CONCLUSIONS

1. Retrodisplacements of the uterus often cause much discomfort.

2. The anatomic arrangement of the pelvic tissue invites a retrodisplacement which causes more discomfort than other forms of displacement.

3. The round ligaments and their coverings act as restraining bands, lessening the possibility of permanent retrodisplacement.

4. The harmonious action of all the supports is essential to the uterus for its normal position.

5. When the round ligaments become elongated by frequent repeated retrodisplacements the intra-abdominal force is misapplied and the displacement becomes permanent.

6. The operation which interferes with the laws governing the normally placed uterus is not to be advocated.

7. The operation which produces unnecessary intra-abdominal traumatism should not be chosen in the ordinary case.

8. Operations which could possibly interfere with the enlargement of the uterus during labor should be used in selected cases only.

9. Operations which leave an additional suture line within the abdomen may cause subsequent trouble.

10. Operations which do not give as strong a support as possible consistent with the normal functions of the uterus may result in failure in some cases.

11. The operation which utilizes the normal ligaments with little or no traumatism is less troublesome and more scientific.

The advantages of the modified Gilliam operation as I perform it are the following:

1. It employs only normal tissue for support.

2. The direction of the pull for that support is in a natural line.

3. It eliminates the weak portion of the ligaments in Nature's plan for the normal position.

4. It does not interfere with normal pregnancy or the uterine functions.

5. No additional suture line is present within the abdomen.

6. No traumatism to the pelvic tissue is produced and consequently adhesions do not follow.

7. It puts the uterus at right angles to the vagina and it elevates and tightens the broad ligaments and lifts up the ovaries.

8. It does not interfere with bowel or bladder functions.

9. It takes the strain off the uterosacral ligaments and favors their return to normal tone.

10. The ligaments are tightened sufficiently to prevent the temporary retrodisplacement; consequently the intra-abdominal pressure is properly distributed.

11. It allows the operator to investigate thoroughly the pelvic and abdominal organs.

12. When the harmonious action of all the uterine supports is restored this operation gives positive and permanent results.

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ABSTRACT OF DISCUSSION

DR. C. W. BARRETT, Chicago: The question of treatment of retrouterine displacement resolves itself, not so much into the treatment of retrodisplacement as into the treatment of retrodisplacement of the uterus and its complications. In 1881, Dr. Alexander gave us the operation of shortening the round ligament, laying great stress on the external shortening of the ligament. A few years later, Olshausen, Kelly and others gave us the abdominal operation, dealing with the pathology and doing ventrosuspension. Ever since that time we have been trying to devise an operation that would give the advantages of the one without the disadvantages of the other, and it is only within the last few years that we have had an operation that practically covers that question. In any operation for retrodisplacement there are certain definite points of advantage which the operation should give us, and it is better to deal with principles when we may rather than with technic. The advantages which any operation must have at the present are: First, safety. We are dealing with a condition that does not cause death, and the operation must be safe. Second, simplicity. The operation must be simple because we must combine it with much other operating. Third, it must allow inspection of conditions within the abdomen. Alexander laid great stress on the fact that his operation was an external one; but for an operation to stand the test of time there must be an opportunity for the most careful inspection and correction of conditions in the abdomen, and the best part of the normal ligaments must be employed to hold the uterus forward. We must also deal with the ligament in a way that will leave it correctly placed, not running transperitoneally, but leaving the abdomen at the proper place, the internal ring, if that is possible. All these operations which have these advantages will stand what Goldspohn calls the double test of pregnancy; that is, they will allow pregnancy to progress to delivery without interfering with the success of the operation.

Those operations dealing with the best part of round ligaments may be divided into two classes: Those which get the ligament within the abdomen where it is easy to find, where it does not take up time, and those which find the ligament outside the abdomen. The latter necessitate a tedious dissection, and it is always doubtful about finding the ligament. After six years' experience with what I call the intramural transplantation of the round ligaments—that is, getting the ligament within the abdomen, taking it out through the internal ring—I have found that it stands the double test of pregnancy, that it does not interfere in any way with the pregnancy and that the pregnancy does not interfere with the holding of the uterus. It has been performed in women who were pregnant, and in whom it was necessary to open the abdomen for an incarceration of the pregnant uterus. Such an operation car-

ries the ligaments out of the abdomen at the right place, the internal ring, and uses the strongest part of the ligament for holding the uterus and makes an anatomically and physiologically perfect operation for holding the uterus forward and allows the surgeon to do anything else necessary within the abdomen at the same time.

DR. J. WESLEY BOVÉE, Washington: Dr. Barrett has given us the proper principles to be followed in the treatment of these displacements, but he has given one operation for all. I hold, and I am not alone in this contention, that there is no one operation that is applicable in all cases. The principles of the proper supports of the uterus have not been satisfactorily worked out to many of us, and certainly the operations for the relief of deformities or defects in these supports have not been satisfactory. Whatever is needed to be done will depend on the condition that is present. I think shortening the round ligament in many instances will be sufficient. But there are so many other conditions that have to be considered; for instance, the defective attachment of the ligaments to the lower pole of the uterus which hold the cervix near to the outlet of the vagina, accompanied with abnormally long uterosacral ligaments. When uterosacral ligaments are attached so high to the cervix that they do not have sufficient leverage to hold it in the hollow of the sacrum no operation on the round ligaments will be of any lasting benefit. In one case I did ventrofixation of the uterus. Eight months later this patient entered Dr. Fry's service in another hospital and Edebohls operated by raising the uterus, appendages and vagina by sutures. The uterus was still firmly attached to the abdominal wall and the cervix eight inches away from that was protruding through the vulva, showing that the fundus might be fastened to the abdominal wall and yet procidentia be present. We see so many cases of procidentia of the uterus in which none of these ligament operations will suffice. Then, again, attention is attracted to the necessity of support from below and looking out for defects in the anterior vaginal wall; so that this field, when details are considered, is an exceedingly large one. I do not think that in any paper or in any number of days of discussion we are very much closer to an absolute determination of what ought to be done, except to find out that no one thing does, and no two things will answer, and that any gynecologic surgeon who depends on one, two or three operations for the correction of retrodisplacement of the uterus will find out sooner or later that he will have to enlarge his list of procedures.

DR. H. J. BOLDT, New York City: I feel that Dr. Bovée has struck the keynote when he said that no one operation is a panacea for retrodisplacements. It must be remembered that the Alexander operation was devised for patients who had a retrodisplacement with the uterus freely movable and with no disease of the adnexa. It is not proposed to cure a patient with procidentia by shortening the ligaments, as devised by Alexander. When the uterus is freely movable and there is no adnexal disease, if the operation is properly done, invariably good results follow. But we must remember that, in that class of cases, the greater number of patients will get along without any operation, a mechanical support alone being sufficient. In that other and larger class of patients with complications, such as diseased adnexa or adhesions of the uterus to the pelvic floor, the method of procedure will differ with the individual experience of the operator. I believe that in women well past the childbearing period no operation will equal ventrofixation of the uterus. But it should never be done on any woman unless she is past the childbearing period. The Gilliam operation or the one suggested by Dr. Benjamin I believe will answer in women likely to bear children.

DR. R. B. HALL, Cincinnati: I agree that there is no one operation that should be used exclusively for retrodisplacement of the uterus. I believe that many conditions exist in which the operation should be varied. It is exceedingly rare, even after the childbearing period, that ventrofixation of the uterus should be done at all. My objection to the operation is the great danger of intestinal incarceration and intestinal obstruction. If we could gather all the cases of intestinal obstruction that have occurred after ventrofixation there would be a large number on record. I appreciate how one dislikes to report cases of intestinal obstruction coming on six months or a year or two years or longer after fixation of the uterus. I contend that with the many operations from which we may select, we owe it to our patients and to ourselves to choose a method which will not carry with it the possibility of intestinal obstruction.

DR. H. O. MARCY, Boston: In my studies of inguinal hernia I find deformity in the construction of the inguinal canal in almost all the instances in which there is weakening of the lateral ligaments. As a consequence, it has been said as a basic principle that we should restore, so far as possible, everything to its normal pattern. The whole secret of cure of inguinal hernia is the normal reconstruction of the parts. Many factors must come into the problem, and it would be easy to write a small volume on this interesting subject. In restoring the weaker portion of the ligaments as referred to and fixing it beneath the peritoneum, we are at the same time reconstructing the weakened inguinal canal. In my later experience I open the abdomen and have everything under inspection. I followed Alexander's operation for a considerable period and was suprised to find failures where I looked for success. I was with Dr. Alexander and saw him operate and had him operate in my hospital. Then I did the other operation of intrafolding or fixing the round ligament to the abdominal wall. When the uterus is freely movable, other things being normal, reconstructing the inguinal canal and replacing properly within it the round ligaments solves in a very large measure this most serious problem.

DR. REUBEN PETERSON, Ann Arbor: No one expects to convince anybody by this discussion. Every operating surgeon has his own way of dealing with retrodisplacement of the uterus and, no matter how much time we may devote to this subject here, every man will go home and to-morrow perform the operation he thinks best. We have heard a good deal about the Alexander operation, and of how it is not an operation for the retrodisplacement when the uterus is adherent. It seems to me, however, that Dr. Marcy has hit the nail on the head when he says that we should reconstruct the inguinal canal. The only way in which we can do that is to perform the Alexander operation as modified by Edebohls—opening the inguinal canal and shortening the ligament within the canal. Then, if we find a hernia, as we often do, it can be cured and the ligament shortened at the same time.

I have tried the various operations suggested for retrodisplacement of the uterus. My experience with ventrosuspension has been very bad. I have had to perform Cesarean section twice for dystocia developing after this operation, hence I never perform the operation in the childbearing woman. I have tried the Webster-Baldy operation. I found that while it is good for a certain purpose—elevation of the ovary—there are so many relapses that I have discarded it. Some years ago I adapted the Alexander method in all cases of retrodisplacement with or without adhesions when the uterus needed to be brought forward and held there. I do it through one incision, a transverse or median incision, taking care of all the pelvic pathology and then opening up the inguinal canal, shortening the ligaments, attaching them to the fascia with chromicized catgut sutures, and finally repairing the hernia if that be necessary. I have found two or three hundred cases of this kind in which the operation has given satisfactory results. Now, there will always be relapses from every kind of an operation for retrodisplacement. As pointed out by Dr. Bovée, we find that if we stitch up the uterus to the abdominal wall in a certain class of cases the uterus itself will stretch out and the cervix will appear at the vulva. We will find that after certain other operations the fundus will fall backward, but these are the exceptional cases. There will be fewer relapses after shortening the round ligaments within the canals than after any other operation for displacement.

DR. I. S. STONE, Washington, D. C.: It seems a little remarkable that cases like these should be mentioned here and no explanation be given as to why certain displacements of the uterus are not curable. Now, take Dr. Bovée's case by way of illustration. Given a uterus whose fundus is fixed to the abdominal wall and, of course, there must be associated trouble with it, if the cervix of that uterus appears at the

in Nature's plan for the normal position.

vulva. It would have been just as well for Dr. Bovée to state, what he knows so well, that the complications around and preceding that condition which have existed for years are the real trouble back of the displacement of the uterus. The cervix appears at the vulva in these cases, not because of its own weight, for the fundus may be attached to the abdominal wall as Dr. Bovée has stated, yet the relaxed ligaments, including fascia and connective tissue, yield before the intra-abdominal pressure from above. As has been said in other years, the reason we do not cure these patients is because we do not understand the pathology, and in the second place, we do not know how to overcome it. I feel sure that in nearly all the cases, whether in a virgin, a married woman or a multipara, the condition is preceded by a descent of the abdominal viscera. If such is the case, why should shortening of the round ligament overcome the trouble? It ought not to do it. The descent has begun in the viscera, the elongation of the so-called sacro-uterine ligaments, and the posterior pelvic peritoneum with the connective tissue has preceded the descent of the uterus. The uterus can not come down until the peritoneum and the posterior supports give way. We ought to recognize that. A great many of us have been trying for years to overcome the second condition first, and we have been getting the cart before the horse. How to correct the descent ought to be the object of every gynecologist instead of inventing some new method by which we can push the uterus back or hold it up. Let us have some papers on how to support the viscera, how to train the young woman so that there will not be the serious consequences to childbirth which are shown very frequently in the form of displacements which we are discussing to-day.

I would like to show why some of the ligament operations are failures. One of the reasons, which ought to be widely mentioned, is paralysis of the nerves in the ligaments which we are trying to shorten. The Alexander operation has failed because the ligaments are seriously injured by the compressing sutures. Webster and Baldy use the best part of the ligament and crush its nerve and blood supply, and when the abdomen is opened for correction of later mischief, a slender string of connective tissue is found with no muscular tissue in sight. Obviously, the ligaments should be secured without strangulation, for injuries to muscular tissue never permit a perfect restoration of function.

DR. HENRY D. FRY, Washington, D. C.: There are many different ways of treating retrodisplacement of the uterus surgically. Many men are perfectly satisfied with the suspension operation; I have had no trouble with it. Pregnancies have progressed normally and there has been no trouble at labor. But sometimes there will be fixation in these cases even when done properly, as Dr. Stone on one occasion did in the gynecologic department of the Columbia Hospital, and I had to deliver the woman afterward by Cesarean section. About fifteen years ago I was trying to find the best method of treating these cases surgically, and my thoughts ran in the direction of the Alexander operation, and I then saw Dr. Boldt operate, but the trouble he encountered led me to discard the thought of that operation. After a long search on one side for the delicate ligament and failing to find it, he went to the other side, caught the opposite ligament, returned to the opposite side and then caught it. Another objection is that the Alexander operation does not cure the complications which accompany retrodisplacement and which are the principal causes of the suffering. One of the most frequent is the prolapse of the ovary. The ovaries are down, and if the uterus is raised, leaving the ovaries down, the patient is going to continue to suffer. I have given up suspension, not from any personal dislike or from any bad experience, but simply because the profession seemed to want to get away from it and I felt that there must be good reasons. I have seen a few cases reported of intestinal obstruction, but have never had this complication.

In looking around for another operation, I then tried the Gilliam method. The trouble with that is the suffering afterward. I find that the Pfannestiel incision—the transverse incision—is advisable in cases in which there is no pus. This incision allows the surgeon to get at the parts much more readily and the operation is much simplified.

I want to say something now in favor of the operation which is here condemned—the Webster-Baldy method. I think that it is *par excellence* the best operation for retrodisplacement; the great advantage being in the lifting up of the prolapsed ovary. The surgeon goes through the broad ligament under the utero-ovarian ligament, catches the round ligament and brings it back in a way that not only holds the uterus forward, but lifts the ovary up. Strangulation of the round ligament has been spoken of as an objection, but I think that is because the operation has been improperly done. If the whole thickness of the round ligament is fastened down it will be strangulated, and it will be a little cord in a few years, but if only half of the ligament is sewed down and the two ligaments used, there will not be atrophy, but a perfect result. In a case reported by Dr. Baldy in which he had done the operation some time before and later took out the uterus, he found that the ligaments had grown into the uterine tissue and could scarcely be seen, but a good firm ligament held the uterus in place.

DR. MARION CRAIG POTTER, Rochester, N. Y.: I think that as gynecologists we are not more successful in curing these displacements by treatments, because we do not get the cases early enough. Advice has always been against the examination of unmarried women, and as physicians we should re-educate the public in this matter. In young women who have severe dysmenorrhea, especially if it has existed since the first menstrual period, some obstruction exists. School physicians when reporting to parents adenoids, eyestrain and defective teeth, should also call attention to menstrual derangements. Dr. Howard Kelly advises the examination of young girls under an anesthetic, and, if indicated, operative procedures.

At this age response to remedial measures for straightening the flexed canal is much more satisfactory, whether by dilatation, Alexander operation or routine office treatment, and such measures not only cure the discomfort, but, by establishing proper drainage throughout the generative system, they prevent the establishment of a "vicious circle," which is sure to follow interference with proper drainage of the pelvic organs, viz., endocervicitis, cervitis, endometritis, metritis, bacteriologic infection from retained alkaline secretion and possibly diseases of the tubes and ovaries. As a result of this symptom-complex, we often have the most unfortunate condition that can befall a woman—sterility. From the standpoint of preventive treatment of sterility, if from no other, we should create a sentiment for early examination of girls suffering from dysmenorrhea.

DR. GEORGE ERETY SHOEMAKER, Philadelphia: I want to speak in favor of the study of the patient, with a reservation in mind that retroversion in itself is not necessarily a condition which requires anything so important as either an Alexander operation or an abdominal section. I think operating on young women who have nothing except a retrodisplaced uterus usually is a mistake. I have always wondered how the large number of Alexander operations could be collected, and in studying my patients I could find few who required simply the reposition of a uterus. If they needed operation at all they had in addition a salpingitis, a diseased ovary, a prolapsed uterus, or some complication which called for more than the Alexander operation. The effort to determine which is the best operation, it seems to me, should resolve itself into the question: What is the best way to keep the uterus forward while the parts are returning to their normal after correcting other pathology in the pelvis? That is often a complicated problem, requiring all the knowledge of mechanics a man can summon to his aid. There is a very limited field for the fixation which has been so much condemned, and only when childbearing is impossible. It is an operation which helps bear up the badly prolapsed uterus after the other things necessary have been done, and usually a good many other things are necessary. There is a field for all the intra-abdominal shortening principles. If operating in the presence of pus and it is necessary to remove extensive adhesions which by contraction pull the uterus over backward, the surgeon cannot tear up the anterior peritoneum and inguinal canal intra-abdominally without some danger of spreading infection. In the presence

of such conditions one of the other methods must be used. Light suspension in front of the line joining the cornua, I have done for several years with no unfavorable result. The round ligaments may be attached to the uterus behind, or some modification of the Gilliam operation may be used. I want to emphasize the necessity of the study mechanically of each combination of conditions and to state that we should very rarely operate simply for retroversion.

DR. A. E. BENJAMIN, Minneapolis: It was the purpose of my paper to bring out a discussion, because I think this subject should be settled. Gynecologists should be agreed concerning the best operation to be performed. If these patients could be seen early, as Dr. Porter stated, before there were many complications, much could be accomplished. We should know whether there was visceroptosis or a greatly dilated stomach pushing down all the abdominal and pelvic organs and necessarily causing retrodisplacement of the uterus. If we could teach young girls how to overcome this condition there would be little necessity for an operation, except for complications, as some disease of the tubes and ovaries. Many patients will develop prolapse of the ovaries because of this continuous crowding of the organs down in the pelvis. I agree with most of the speakers regarding the principles underlying this subject. I cannot agree with men who believe that ventrosuspension should be done, although I have done it myself; I no longer do it because of the possibility of obstruction of the bowel from the false ligament.

I do not agree with those who believe the Webster operation, or those operations which shorten the round ligament within the abdomen, are ideal. As has been said, they use up the best part of the ligament. There is constriction of the uterus and interference with the blood supply. The idea of my operation is to utilize the same principle involved in the Alexander operation. The skin is dissected back from the fascia and a forceps run down through the tissue in the region of the internal abdominal ring; the round ligament is caught, pulled out, spread out and fastened to the abdominal fascia. The uterus is firmly supported and there is no pain or other trouble following the operation. I find that in this operation I can do a transverse incision nicely, especially in young women, by making a cut at the upper border of the pubic hair line. I carefully examine every patient to see that there are no other conditions to consider than the retrodisplacement.

If the abdominal muscles are relaxed with prolapse of the abdominal organs, I have these patients take exercise, put them in the knee-chest position, put on a long straight front corset, and then I find that gradually the organs assume the normal position.

Forestry and Health in France.—According to *Science*, France derives from her state forests an annual income of approximately five million dollars, or $1.75 per acre. Eighteen per cent. of the entire area of the country, or 23,500,000 acres is forest land. Approximately six million acres are managed by the state, the annual cost of management being ninety-five cents an acre. The great achievement of France in forestry has been the establishment of protective forests where much destruction has been caused by floods. Toward the close of the eighteenth century about 2,500,000 acres comprised in the Department of the Landes were little more than shifting sand dunes and disease-breeding marshes. This section is now one of the richest, most productive and healthful in France. The change has been brought about by the intelligent cultivation of pine forests. Immense forests now cover the country, the sand dunes and marshes have long since disappeared, and the wood, charcoal, turpentine, resin and kindred industries have brought prosperity to the department, which was formerly the most barren and miasmatic in France. The climate is now mild and balmy, the great change being wrought by the forests. The thin layer of clay beneath the sandy surface, formerly impervious to water, has been so pierced by the roots of the pine that there is now thorough drainage to the spongy earth below. The manufacture of resin, tar, turpentine, pitch, pyroligneous acid and wood vinegar is conducted in about the same way as in Georgia and the Carolinas.

THE PRESENT STATUS OF IRRIGATION AND DRAINAGE IN OBSTETRIC AND GYNECOLOGIC OPERATIONS *

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Though there may never be complete unanimity of judgment and opinion regarding the details of the requirements for irrigation and drainage in gynecologic and obstetric operations, there is a growing disposition among us to simplify our practice in these particulars. This has come about through the gradual elimination of the sloppy flushing practice of a few years ago and the abandonment of things like huge glass drains and suction syringes.

A process of evolution by exclusion has simplified the approved practice of today, and in both obstetric and gynecologic operations better results have been obtained with the simpler methods.

The use of solutions of antiseptic drugs, particularly those of the poisonous varieties, is steadily losing favor. The practical antiseptic efficiency of such solutions for irrigation is questionable and the dangers incident to their use are known and recognized. Not only have serious poisonings occurred but deaths from poison have resulted from this practice, and the diffusion and distribution of a previously localized infection has not infrequently occurred. An example of these dangers is afforded by cases in which uterine perforations have accidentally been made during a curettement following abortion, and a solution of bichlorid of mercury has been thrown into the peritoneal cavity through the uterine rent. In this event chemical poisoning and the distribution of the infection both take place. I have knowledge of one such instance; many may be found in medical literature, but for obvious reasons most of such unfortunate occurrences have not been reported.

Irrigation is doubtless best employed for its mechanical effect in washing out of the body such loose debris as the cavity being treated may contain. To this end the force employed should be at the minimum for efficiency and the solution used the least irritating possible.

The elementary principles governing the best modern obstetric and gynecologic practice would seem to be about as follows: Never irrigate if it be possible to avoid it through gentle wiping or sponging. Avoid poisonous and irritating solutions, as they are both dangerous and disappointing. In the main, use irrigation for its mechanical effect in flushing out debris, and always at low pressure.

Summarizing the prevalent opinions of today as to drainage in obstetrics and gynecology one finds it contrasting strongly with opinions and practice of but a few years ago, and happily, also, in the direction of simplification. One now finds himself disposed to avoid the use of drainage wherever possible and believes it possible to do without it many times where it was formerly deemed an absolute necessity. So, too, our ideas of drainage methods have undergone a change for the better. Glass drains are now rarely used even in the abdomen, and by only a very few operators. Gauze, always an indifferent drain, is more often employed for packing and walling off infected areas, arresting oozing of blood which may otherwise be difficult to control and

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* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Sixtieth Annual Session, held at Atlantic City, June, 1909.

for guarding against fecal and urinary infiltration into the tissues, and leaks into the cavities of the body when the hollow viscera have been injured or sutured.

The majority of the best surgeons of today limit the use of intra-abdominal irrigation and drainage to few and to certain specific indications, chief of which are rupture or leakage from some hollow viscus or localized abscess which has poured into the abdominal cavity food, urine, pus or blood in considerable quantities.

In certain cases of ruptured ectopic pregnancy irrigation serves the double purpose of flushing out the clots and debris and supplying the body with much needed fluid for the heart and blood vessels to act on. Also, in certain cases of shock, a normal salt solution instilled into the peritoneal cavity may act well; but that is not the particular phase of the subject this paper is intended to consider.

It is now generally appreciated that some localized accumulations of pus, particularly those of long standing and of tubal origin, may be safely broken down and turned out through an abdominal incision without irrigation or drainage even though the adjacent surfaces be extensively soiled. Indeed the plan of coffer damming and wiping out with dry gauze is believed to give much better results in such cases than did the older practice of irrigation and intra-abdominal drainage. So, too, certain localized peritoneal infections originating in the appendix are better treated without irrigation and intra-abdominal drainage even though the appendix may have ruptured and the adjacent loops of intestine be injected and mottled with many patches of lymph. Often in such cases the peritoneum will take care of its end of the infection without a protest, though the wound in the abdominal wall may suffer a serious infection which, if unprovided for by a superficial drain down to the peritoneum, may cause great anxiety. The interesting pathologic problems of established immunity on one hand and attenuated virility on the other are important factors under such circumstances, but these also lead us far afield and into a consideration of deeper mysteries than we are prepared to undertake to explain.

Whenever intraperitoneal drainage is really necessary in gynecologic surgery it is certainly better to make it from the bottom of the wound and "down hill" if possible; that is, through the vaginal vault. This plan has so many evident advantages other than the predisposition to hernia which a deep drain through the abdominal wall favors that they need not be enumerated.

Intrauterine irrigations in gynecologic and obstetric surgery have been illogically practiced for more than a generation, and even now poisonous solutions are constantly employed by many physicians who are doing curettements after abortions or after delivery at term, notwithstanding the fact that most of the recent authorities have shown them to be ineffective for good and capable of doing great harm.

The routine employment of such intrauterine douches after uncomplicated normal labors is also advocated and practiced, though the weight of evidence is overwhelmingly against it. In Williams' "Obstetrics"[1] may be found this statement:

> **It has been shown experimentally by Bumm that mercuric chlorid injections penetrate the tissues only to a very slight extent. He took the liver of an animal dead of anthrax, and after soaking it for thirty minutes in a 1 to 1,000 mercuric chlorid solution, placed it on a freezing microtome, and cut thick sections from it. After cutting off about 1 mm. he inoculated the next section into another animal which succumbed to anthrax, thus showing that the germicidal action of mercuric chlorid had been exerted only on the surface. If this be the case in the laboratory after the tissue has been immersed in the antiseptic solution, what effect can be expected on organisms embedded in the muscular wall of the uterus, from a transitory application to the surface of a few liters of a weak mercuric chlorid solution? Bumm likewise showed that the streptococci made their way through the uterus with great rapidity, traveling 2 cm. or more in the space of six hours. What has been said concerning mercuric chlorid applies equally well to the other disinfectants.**

Notwithstanding the frequent reiteration of statements like that just quoted in almost all the recent standard text-books on obstetric and gynecologic subjects, many general practitioners and not a few gynecologic and obstetric surgeons persist in the use, or rather the abuse, of the poisonous intrauterine douche. Proof positive has been offered time after time of the fallacies and dangers of the poisonous antiseptic intrauterine douche and there is practical unanimity of opinion among teachers and writers that its effects can be nothing but bad, and yet it is employed constantly by many who should know how dangerous it is.

What is there about the practice of the obstetric art that makes the average man so impervious to incontrovertible proof? Our reluctance to accept the truth in regard to the contagiousness of puerperal fever for almost a half century after it had been logically proved is an indictment under the shadow of which we should long stand in deep humility and in atonement for which all our efforts should be exercised in a determination henceforth to keep our minds open to conviction.

Intrauterine drainage is, under some circumstances, a most important surgical detail, but, so far as I have been able to observe, it is rarely employed logically or with a proper regard for the mechanical principles involved in the attainment of the ends sought.

From a mechanical standpoint, a tampon is little more of a drain than a dam is an aqueduct in hydraulics. If the conditions inside the uterus are such as to demand drainage in the true sense in which the word should be used, a gauze tampon, or even a gauze wick, if that term be preferred, does not meet the indications. The capillary action of gauze is incapable of carrying off under any circumstances more than the thinnest fluids, and even those only for a short time, as the meshes of the gauze soon become filled and its capillarity is destroyed. The principles of true drainage require that the drain shall be open and free; that it shall be capable of conveying thick fluids, such as pus, blood, mucus or necrotic debris, and that it be capable also of being flushed and freed while *in situ*.

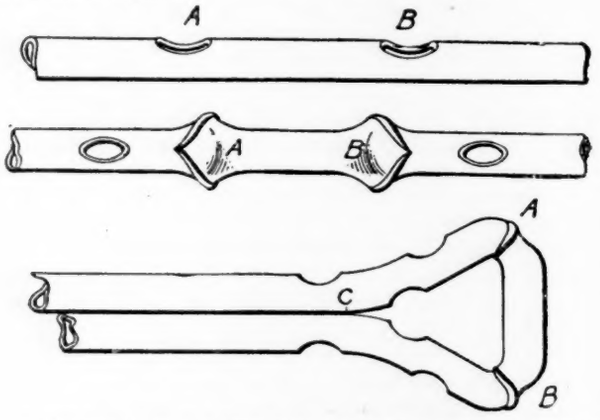
Such a drain is often invaluable in the uterine cavity, as it may be in many other situations; but, with the known tendency of the internal os to contract and so retain within the uterus putrescible or infected material, a free drain adapted to flushing and capable of conveying thick fluids is a necessity. Such a drain I devised some years ago and my experience with it has been such that I venture to speak of it here, notwithstanding previous mention of it elsewhere. It is made of rubber tubing of a size adapted to the requirements of the case in hand and of thick or thin walled tubing, depending on the pressure it must withstand from without. It may be adapted to bladder irrigation and drainage, as it makes an admirable and easily constructed retention catheter out of material always at

1. Obstetrics, 1908, pages 885-886.

hand and one that can be readily introduced and removed. It works equally well after operations for perineal or suprapubic prostatectomy and for draining the pleural cavity it is admirable, but as an intrauterine drain in infection, sapremia, etc., it has been found most useful. The accompanying drawing and legend will best describe its construction.

One of the most dangerous features of the ordinary intrauterine douche as it is commonly employed is the necessity for frequent and repeated introductions of the irrigator through the infected vagina and cervix with all the risks of a retrograde infection that necessarily attend such a proceeding. When practiced by the physician or nurse several times a day, as is sometimes done, it is inconceivable that the vaginal, cervical, or vulval bacteria are not conveyed into new fields during the operation and the patient may be congratulated if she does not also receive some new infection from the hands or instruments of the operator

Such retrograde infections of the bladder are of common occurrence as a result of the repeated use of the catheter, even though the opportunities for cleansing the field are good.



1. Cut two holes in a long piece of drainage tubing as indicated at A and B. 2. Draw one end of the tube through A and out at B, thus inverting that portion of the tube between the holes as seen in 2. 3. Bend the legs of the tube down so that the holes A and B will be left open for drainage. If bent in one direction they are open, if in the other closed. Tack with a blind stitch at C.

The advantages of an irrigating and draining device which may be placed once, and once only, with due precautions against infection and through which the drainage and the flushing fluid may always flow from within outward must be apparent, whether the cavity to be flushed and drained be that of the bladder, the uterus or the pleura. This flow from within outward is accomplished in a most satisfactory way by the tube shown. When used with diluted alcohol, according to the suggestion of Carosso,[2] or with sterile water, salt solution, a solution of potassium permanganate or a dilute iodin solution, it may be a means to a most desirable end.

Through these tubes an intermittent flushing of an infected uterine cavity may be made by a nurse at frequent intervals without changing the position of the patient in her bed, or, indeed, it may be done without waking her if she should be asleep, as one of the legs of the tube can be permanently connected with the reservoir containing the flushing fluid and the other with the receptacle beneath the bed, so that the fluid can be carried into and out of the uterine cavity by continuous flow, if that should become necessary, and be stopped or started at will with a simple pinch cock.

Dilute alcohol solutions (33 per cent.) so used have given astonishing results in the after-treatment of sapremia and uterine and vaginal infections.

With this simple device for drainage and a continuous flow of boric acid solution at low pressure success has also attended efforts to close large vesicovaginal fistulas in badly infected bladders, one person having been previously unsuccessfully operated on eleven times during twelve years. Success in this instance was made possible by the perfect draining of the bladder and the prevention or solution of the ammoniacal urinary concretions and incrustations which had been deposited on the catheter and bladder walls in her previous operations.

Drainage, real drainage, of the uterus and bladder under certain conditions may be indispensable.

When irrigation of these cavities is necessary it should be made with non-poisonous solutions, and in the main with a view to their mechanical effect in flushing the cavity as in contradistinction to their chemical and antiseptic effect.

Low hydrostatic pressure should be employed and ample provision must be made for the return flow of the flushing fluid.

ABSTRACT OF DISCUSSION

DR. I. W. POTTER, Buffalo: While douching following normal labor has its disadvantages and is said to be dangerous under certain circumstances, I think it also has its advantages, and with me it is a routine practice. I do it myself, but never dot it more than once in each patient.

DR. W. W. GOLDEN, Elkins, W. Va.: I wish to add my testimony from a somewhat extensive experience to the utility of the use of douches of solutions of iodin. This solution serves a useful purpose, especially under certain conditions in which the general practitioner often has to work, when it is not convenient or possible to exercise and practice proper aseptic precautions in intrauterine manipulations. The use of iodin solutions a little stronger than usually recommended has proved satisfactory in my hands and in the hands of a number of physicians who have followed my suggestions.

DR. EDWARD J. ILL, Newark, N. J.: In considering the question of drainage of the uterus we must remember that the uterine cavity is not a hollow space, that the walls come together. No irrigation tube will separate these two surfaces sufficiently to keep the cavity perfectly clean. To do it well, the much-maligned gauze should fill the uterus. If the physician will separate those two uterine walls by gauze and through the center of it put a rubber tube up to the fundus with an opening at the end and pour a 25 per cent. solution of alcohol through it once in three hours, he can thoroughly cleanse the uterine cavity without in the slightest disturbing the patient. These septic surfaces are constantly bathed with a 25 per cent. solution of alcohol. Ahfeld describes scientifically the importance of disinfection with dilute alcohol. I have used this method for fifteen years and whenever I get hold of a patient within two or three days of the infection she recovers. If I get the case later than that, the infection has entered the lymphatics or the veins and the results are not so certain, though in many cases they are satisfactory. At the end of five or six days the gauze and tube are removed and the gauze is found to be just as clean as when it was put in. This gauze is not foul and ill-smelling and filled with all sorts of discharges from the uterine cavity.

DR. HENRY D. FRY, Washington, D. C.: I protest against what has been said about the use of intrauterine douches after normal labor. I am sorry that the doctor who said there were certain advantages to be derived from it did not state what they were, and I can not see what the benefits are. If the labor is normal and the uterine cavity is not infected there is danger of carrying infection into the uterus by douch-

2. Wetherill: Am. Jour. Obst., 1903, xlvii, 5; Am. Med., Jan. 30, 1904, p. 189

ing it. This method has been tried and we know that the morbidity and mortality have both been increased by the use of the intrauterine douche when there is not distinct indication for its employment. I agree with the essayist that it seems to be very difficult to stop this practice among obstetricians; men who are supposed to be conversant with the best methods of treatment and that they will continue to use the curette also, which I think is dangerous, unless clearly indicated. I think there are distinct indications for it in some cases—infection, especially of the saprophytic kind, also septic endometritis, and when débris, foreign matter and clots have been retained. I think the effect is just as good from the use of normal salt or sterile water as from an antiseptic solution. It is the mechanical effect of the water that does good. If there is colon infection the douches are good. In streptococcus infection there is no advantage in the use of the douche. If streptococci are found, let the uterus alone after a preliminary cleansing.

One point not mentioned and which has given me much trouble is in connection with the vaginal operation for ectopic gestation with extraperitoneal hematocele; in which one opens through the vault of the vagina and through the sac, to get out broken-down tissues and clotted blood. I clean out and put in a double drainage tube, but I have not been able in a single case to prevent fever. I should like to hear the experience of some of the gentlemen in these cases. Notwithstanding my greatest care in washing out the sac and inserting a double drainage tube, I have had septic fever. All my patients have recovered, but I look for fever in such cases for about a week or ten days, and if anyone knows how to drain these cases and not have fever, I should like them to tell me.

DR. H. P. JACK, Canisteo, N. Y.: I do not believe the members of this Section, at least those with whom I have talked, know of the benefits to be derived by following Dr. Wetherill's technic. For the past five years in an extensive consultation practice I have seen many patients with septic infection of the uterus, some of the cases being of longer standing than mentioned by Dr. Ill, some of the patients almost moribund, and yet I have seen them recover under the persistent use of this technic. I commend the method; it should not be withheld in streptococcic infection. The alcohol is absorbed as well as the streptococci and how much good is done we cannot say. I have seen patients in whom the chills persisted, and multiple abscesses had formed at the points of pressure, recover under this treatment carried out for three or four weeks. I have never been able to obtain any such results with anything but alcohol, and I hope we shall have a more general use of a measure which is of such value.

DR. H. G. WETHERILL, Denver: Many of us feel that there is a very limited field for vaginal operation for ectopic pregnancy. While that field is limited, it has special indications which must be met, and one of them is "drainage," so-called, but in my judgment that is one of the forms of "drainage" to which gauze is better adapted than a tube. It approaches more nearly a need for a tampon than for a drain. My own practice, when vaginal operation is done for ectopic pregnancy, is to evacuate and pick out the clots as well as possible and to tampon with a wad of gauze. If in my opinion this will not meet the indications, abdominal section is done. The opinion of Dr. Ill I should have a great deal of respect for, because he has doubtless had a large experience with the intrauterine douche with alcohol solutions in sepsis and I have no doubt he obtains good results by his method, but in my judgment he is entirely in error in saying that there is no cavity inside the pregnant uterus. In the ordinary case in which pregnancy has advanced beyond six or eight weeks, the uterus is flabby and soft and its walls do not fall together as in the unimpregnated uterus, but whether there is a cavity or not is unimportant. Packing gauze into the uterus and leaving the gauze as a dam and not as a drain, interferes very much with the return flow from the uterus and it makes necessary—what is not necessary with the tube alone—the removal and changing of the gauze at short intervals. This is a menace to the patient because of the risk of retrograde infection.

A STUDY OF THE TRAUMATIC INSANITIES *

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The study of the question of the relationship of trauma to insanity clearly reveals the fact that medical opinions on this subject are not as yet well settled or defined.

Many writers, especially the older ones, hold that injuries to the head and cerebral concussion, by causing inflammation of the meninges which spread to the brain, disorder its circulation and nutrition and thus produce psychic disease, at once or after a long interval. This theory has not been sustained by the facts found in many cases, for the reason that the surgeon and pathologist have failed to show such a state of facts. If such lesions did exist they would have given recognizable symptoms (which actually have been entirely absent) during the interval. Most of the more recent writers have modified this view and hold that, with or without material injury, the shock produced by the accident may cause molecular changes in the brain, thereby producing psychic disturbances or a predisposition, especially in neurotic individuals; that such insanity may not occur until after a long interval, during which no special symptoms occur, and that the immediate cause of the condition is some later intervening factor.

This view is also open to objections. It must be admitted that, in those cases in which an interval of time occurs, these later etiologic factors are of themselves competent effective causes in persons who have received no such injury; that there is no proof of any such molecular changes if they produced no recognizable conditions, and that every human being has at various times in his life received injuries to the head of varying severity. Thus a history of head injury is of no more importance in an insane person than in other individuals. One of these authors is conflicting in his statements when he adds that the trauma must be of some consequence and produce cerebral concussion.

The solution of this question appears to be that both organic changes occurring after severe head injuries, and severe fright occurring with trivial injuries, may immediately or after a period be followed by psychic disturbances, and that in the latent cases the two must be connected by recognizable conditions.

One writer contents himself by stating that "all degrees of injury to the skull or brain may be followed sooner or later by progressive dementia." Such assertions as this are objectionable, as they form the basis for the assumption that any dementia occurring at any time after an injury may be due to it. The importance of this question from its medicolegal standpoint is very great, and the conflict of opinion has done much to discredit our profession as a scientific body.

Excluding hysteria, three psychoses seem to be well recognized as being the direct result of psychic or physical trauma, psychic trauma causing traumatic hypochondria, and physical trauma, acute primary traumatic insanity, organic dementia, or idiocy and imbecility.

Much of the confusion which surrounds even these psychoses is due to the fact that authors often attempt to describe them together as the result of head injury and thus fail to define the conditions clearly.

* Read in the Section on Nervous and Mental Diseases of the American Medical Association, at the Sixtieth Annual Session, held at Atlantic City, June, 1909.

TRAUMATIC HYPOCHONDRIA

The peculiar mental picture presented by many of the traumatic neurasthenias and hysterias caused them in the past to be described under the name of the traumatic neuroses and more recently under that of the traumatic psychoses.

The weight of medical opinion as to the nature of the condition in question, as shown in the more recent medical writings, is shown by the facts that Kraepelin, Oppenheim, Strümpell, Mendel and Bruns hold that it is a pure fright neurosis and differs from hysteria in origin, clinical expression and course; that Diefendorf states that the French writers, Schultz, Hoffman and Mendel, hold that it is either hysteria or neurasthenia; that Charcot held it to be purely a hypnotic condition; that Oppenheim states that the autopsy findings are usually negative, that a few cases have shown arteriosclerosis; that Friedman, Kronthal and Koppen consider it to be due to vasomotor disturbances; that Schmaus, Bickles, Vibert and Koppen believe that minute material alterations are concerned in the condition, and that it is in reality a combination of neurasthenia and hysteria with a peculiar mental state, and that Strümpell states that there is no material injury but purely a psychic change.

It appears from this statement that the hypotheses of some of the older writers of minute material alterations, a term which is exceedingly indefinite, has not been substantiated either by the course of the psychosis or the pathologic findings; that the presence of arteriosclerosis can not be regarded as of more than an accidental occurrence, for it has been found in only a few cases and is a common condition in mankind; that the fact that vasomotor disturbances should have been found in some cases is not of any importance, as these regularly occur in hysteria and hysteria regularly complicates this psychosis, and that the condition is a pure psychosis.

The condition may be defined as a fixed delusion on the part of the patient that he has sustained some severe and permanent injury as the result of some accident, and is often complicated by hysteria or neurasthenia or a combination of both. This delusion in no way differs from similar hypochondriac delusions due to other causes.

The producing causes for this symptom-complex are stated by Kraepelin and Diefendorf to be general but not severe injuries with but little shock, but accompanied by fainting and excitement; Kraepelin, Oppenheim, Diefendorf and Strümpell say that it is due to a tormenting anxiety and a morbid state of the mind and that it may occur without injury; Diefendorf says that it is a question if the emotional disturbances which occur at the time of the injury should be regarded as the cause, since frequently weeks or months elapse between the injury and the first symptom; Diefendorf and Strümpell state that an important factor is a claim for damages or a membership in an insurance society, and Oppenheim says that it may develop without a claim for damages. It appears, then, from this statement, that this condition may arise either from the happening of some accident or from the occurrence of other factors which may arise weeks or months after its happening.

A study of my cases reveals the fact that this delusion may arise from an exaggeration of the consequences of the injury, especially when founded on symptoms of a hysterical nature; from an error in diagnosis and prognosis on the part of the patient's regular medical attendant, as we not infrequently find hysteria diagnosed as multiple sclerosis, myelitis, cerebral or spinal hemorrhage, neuritis, concussion of the brain or cord, and epilepsy, from the fact that when legal proceedings have been begun the patient is apt to fall into the hands of a physician retained by his attorney, whose sole function appears to be to make the case appear as grave as possible; from the fact that the examination of the patient often discloses the existence of some previously existing condition of which the patient had little knowledge, which the patient attributes to his injury and becomes the foundation for his delusion, and from a claim of damages or membership in an accident insurance, which, although it may not be the direct originating cause, has an undoubted tendency to make the condition more marked. Usually we find more than one of these factors acting in the same case.

Of 31 cases, reports of which I have been able to collect and in which the condition is known after periods varying from seven to twelve years, 13 occurred in females and 18 in males. The ages varied from 21 to 58. Nine occurred in the third decade, 16 in the fourth, and 3 each in the fifth and sixth. It is then a psychosis of middle life—a period when the struggle for existence is most intense. This fact is emphasized by the social condition of my patients, as 29 of them belonged to the humbler ranks of life; their incomes were barely sufficient to meet their necessities, and anxiety about the nature and consequences of their injuries would be naturally most marked in such persons.

The character of the accidents were falls from the steps of cars in 8, falls from wagons in 4, blows on the head in 5, falls on the buttocks in 2, general commotion from collisions in 12—and 5 of the latter sustained no objective signs of injury. The physical results of these accidents were contusions on the head and body in 22, a Colles' fracture, a broken nose, a sprained back and a crushed hand in 1 each. These cases, then, support the contention that the physical injury is usually slight and that it is the fright and anxiety due to the accident which is the real producing cause. This fact is also shown by the immediate symptoms occurring in these cases, which were fainting in 6, daze in 7, shock in 3, and hysterical and real coma in 1 each. In the other cases there were no immediate symptoms. In all these cases a more or less marked condition of hysteroneurasthenia developed.

The psychosis itself developed immediately after the accident in 16 cases, while of the remaining cases a period of one week elapsed in 5, two weeks in 4, two months in 4, and seven months in 2. The influence of the character of the diagnosis and prognosis in developing the psychosis is very evident in my cases. In 7 of the immediate cases the condition was diagnosed as a serious and permanent injury, in 4 the character of the condition was recognized but permanency was claimed in 2, and in the remaining 7, in which a good prognosis was given, all made a quick recovery. In 4 cases the discovery of a floating kidney, a uterine displacement and an irregularity of the skull and ribs, which were claimed as fractures, was the foundation for the psychosis. The effect of the opinion of the physician who examined them on the part of their attorney is also evident, for in 9 a marked increase occurred in the symptoms after the examination, while in one personal case in which the patient was assured that his physician was mistaken in his having a spinal-cord hemorrhage, rapid improvement occurred. In 9 of the cases in which a period of time elapsed between the accident and the psychosis, the latter did not develop until litigation had been commenced and such examination made. In 2 of these an error in

diagnosis on the part of the medical attendant had also been made.

As a result of such causes the patient's mind becomes dominated by a fixed delusion that he is suffering from a serious and permanent organic injury which has ruined his life. This delusion differs from the fear of evil consequences of the neurasthenic from the fact that the latter has some doubt of the reality of his fear, that he does not lose the hope of recovery, that his fears are not clearly systematized as in this condition, and that he never commits suicide. Loss of memory is often claimed, but is never real; the apparent loss, mental slowness and confusion, being due to the fixation of the mind on one train of the concepts. The patient becomes emotional, irritable, depressed, apathetic, avoids society, and is constantly talking about his miserable condition and his ruined life. In some cases there may be violent outbreaks, hallucinations, and suicidal attempts. With this condition we have as a rule hysteroneurasthenic symptoms.

The prognosis of this condition is of great medicolegal importance. Diefendorf holds that in light cases, even after a long duration, it is good, and that it is worse in cases with marked local symptoms; Kraepelin that many cases are obstinate in their course and that the condition often disappears after damages are paid, and Oppenheim believes that the prognosis is bad in cases with advanced arteriosclerosis, that marked cardiac or vascular symptoms make recovery rare, and that litigation and early return to work are unfavorable. In my cases 26 patients show, after a period of from five to ten years, a condition of complete recovery. Of the 5 patients who have not recovered, 3 are over fifty and show well-marked arterial degeneration and the other 2 have hysterical contractures. The effect on the prognosis of an early and correct diagnosis is well marked in my cases. Of the 26 cases in which recovery ensued, 14 were diagnosed as permanent organic conditions and 1 as a permanent form of hysteria; and in these cases recovery occurred in from one to five years; and in the remaining 11 cases in which a correct diagnosis and prognosis was made, recovery occurred in from two months to two years.

The effect of litigation in prolonging the psychosis is also clearly shown. In 21 claims for damages existed and in all but one no recovery occurred until such claims were disposed of. Ten of these cases came to trial. Six of the plaintiffs were given favorable verdicts and then recovered after periods varying from six weeks to four years. Of the 4 patients who were unsuccessful in their suits 2 recovered after periods of one year and 2 have not improved. In 10 of these cases settlement was made out of court, and 8 of the patients recovered after periods of from two to eight months.

ACUTE PRIMARY TRAUMATIC INSANITY

This form of insanity seems to be one for which an injury is the only recognized cause. It is also undisputed that trauma, to be the producing agent, must cause an injury to the brain, and that the symptoms of the insanity must be continuous with the symptoms of the injury or be connected with them by a definite train of cerebral symptoms.

That insanity is not a common result of head injury is shown by the facts collected by Meyer, who shows that in the Franco-German war only 13 cases occurred in 8,985 head injuries; that Stapler found 12 cases in 931, Meyer 1 per cent. in 3,000, Frost 1.87 per cent., Kiernan 2 per cent., Edel 2.5 per cent.; and I have found 1.8 per cent. in 1,668. The contention of Kraepelin, Peterson, Meyer, and Kellogg that the producing cause must be a severe head injury is supported by the histories of my cases, for they all show well-marked effects of cerebral contusion, as profound coma, and were complicated by fracture of the skull and meningeal hemorrhage in 6 each.

The assertion of Meyer that insanity occurring as the result of such injury is most often found in persons of a neuropathic heredity, or suffering from alcohol or syphilis, is supported by the facts found in my cases; an insane family history existed in 5, previous insanity in 4, alcoholism in 6, and syphilis in 8.

This form of insanity is one in which a definite lesion has been shown, both by the surgeon and pathologist; and that is the lesion of cerebral contusion. Fractures of the skull are not of themselves of any etiologic importance except as they show the severity of the producing cause or cause a compression or penetration of the brain. Such contusions are most common about the fourth ventricle or at the tips of the frontal or temporal lobes (Meyer). Microscopically they consist of minute lacerations, minute hemorrhages and thrombi, capillary stasis with cellular infiltration of the vascular walls and lymph spaces, and a localized or general edema. Meningeal hemorrhages of varying size are also common. It is well established that all these lesions except the large hemorrhages may entirely disappear; but in some cases the condition may be followed by permanent changes in the cerebral circulation and nutrition.

The clinical picture and course of a case of this form of insanity is held by Kraepelin and Meyer to be diagnostic of a severe cerebral contusion; and my cases fully sustain this contention, for in all the injury was followed by coma lasting from one to thirty-six hours, muscular relaxation, dilated unequal sluggish pupils, rapid feeble pulse, and followed by headache, vertigo, delirium and a rise in temperature. In the majority of the cases the insanity immediately follows the symptoms of the cerebral contusion, but in other cases a period of time intervened which was usually short, but, as shown by one of Meyer's cases, may be as long as twenty-three months. In my own cases the insanity immediately followed in 19, and in 9 a period of from six days to one year intervened. During this period these patients suffered from headache, vertigo, insomnia, irritability and change in disposition.

The invasion of the psychoses is rapid. The patients become excited and sleepless or somnolent, or the two conditions alternate. The mood varies from depression to elation, with no idea of illness. The patient at times is agitated and violent. Mental confusion is marked, as is loss of memory, especially for facts just before and following the injury. There is marked loss of knowledge of time, situation and identity of persons. The answers to questions are rapid, rambling, and the facts asserted are fictitious. Hallucinations and delusions, brief in duration and changing in character, are common. Objectively there is a general tremor increased by movement, indistinct speech, a spastic paralytic condition of the muscles with twitching, and occasionally convulsive attacks of the petit or grand mal type. The deep reflexes are increased and Romberg's sign with ataxia of the limbs is common. The pupils vary at different times and may be dilated, contracted, unequal or irresponsive, causing the case to resemble general paresis. After several weeks or months, improvement gradually occurs and the case may go on

to complete recovery, or this may be incomplete, or pass into some other form of mental derangement.

The duration of the psychosis in 11 cases reported by Meyer in which recovery took place was from two months to two years; and in 18 similar cases of mine, from six weeks to two years. Death occurred in 4 of Meyer's cases, after the development of the psychosis, after two days to one month and in 4 of my own after a period of from seven days to four weeks. In the remaining cases reported by Meyer 3 patients recovered but relapsed, 2 made partial recoveries, 1 developed epilepsy, and 4 developed some other form of insanity. In the 10 similar cases of mine 2 patients became epileptics, 2 partially recovered, 1 developed manic-depressive insanity, and 5 passed into dementia.

Kraepelin and Meyer assert that, when dementia follows this psychosis, it is always the result of epilepsy, arteriosclerosis, or alcoholism; and this statement is sustained by the facts found in my cases. Death, when it occurs, is due to exhaustion from continuous muscular movement and persistent insomnia.

ORGANIC DEMENTIA

As has been said, this psychosis may follow acute primary traumatic insanity, or may be the result of traumatic epilepsy, or of cerebral hemorrhage, thrombi, meningitis and abscess due to the same cause. Such a dementia is, of course, permanent in character, and more likely to occur in persons suffering from arteriosclerosis, alcoholism, syphilis or a neuropathic taint. To establish a dementia, then, as of traumatic origin it must appear that it was preceded by one of the conditions mentioned.

IDIOCY AND IMBECILITY

These may in the same way follow any injury which destroys the brain tissue before development, as hemorrhage, thrombus, laceration or abscess; but it is to be noted that the reparative powers at this early age are so great as to make this result very uncommon.

DEMENTIA PRÆCOX, MANIC-DEPRESSIVE INSANITY, MELANCHOLIA, ACUTE DEMENTIA, AND PARANOIA

These have been described as occurring from the shock due to some injury. From the small number of cases said to be due to this cause it would appear that the accident either only called attention to an already existing condition or hastened the development of the psychosis.

GENERAL PARESIS

The relation of this condition to injury to the head is yet a much disputed question. Some writers maintain that it may be directly due to the injury; others that the injury only aggravates the course of an already existing condition (for, as is well known, paresis may develop rapidly after a long latent period), and others believe that the so-called traumatic cases are really ones of acute primary traumatic insanity passing into dementia. The superficial resemblance of this condition to true paresis has already been referred to. In my opinion the two latter views are the most probable. It is easy to understand how such a complex lesion as that of paresis might be aggravated by a cerebral contusion though not caused by it, and how the traumatic cases closely simulate paresis. I myself have never seen a case of true paresis which I was satisfied was of traumatic origin.

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ABSTRACT OF DISCUSSION

DR. M. ALLEN STARR, New York: Three cases of traumatic insanity have come under my observation in which successful operations have been performed for the relief of the insanity. None of these cases corresponded to any of the ordinary types of mental disease as described. In the first case a young man of 21 was subject to sudden attacks of violent headache which culminated in an attack of acute mania, with destructive impulses. These attacks would last from three to five days, then subside, and he would be entirely free from the condition. He had a perfectly good memory which indicated that there was no epileptic psychosis. Dr. McCosh opened the skull over a point of tenderness on percussion, just posterior to the ascending parietal convolution in the superior parietal lobule about its junction with the interior lobule. This patient had a history of having had a fall as a boy at the age of 12, although the symptoms did not come on until he was 14, and he was operated at 21, after this long period of invalidism, and we found a very beautiful angioma that it was perfectly possible to tie off and take out, with complete recovery.

In another case which came under my observation not long ago, a man had been hit a severe blow in the head. He had been perfectly healthy before that time. He was coming up out of a boat and did not notice the projection of the gangway as he came up, and hit his head very suddenly. He was dazed for a moment, and next day he was found to have a slight paralysis of the opposite side of the arm and face that lasted for several weeks and gradually passed off. Then he became subject to sudden attacks of wild maniacal excitement in which he had been homicidal on several occasions. These attacks would come on very suddenly, without warning, and they had occurred from time to time when I saw him for four or five years. The hemiplegia in the meantime had entirely passed away, nor was there any physical evidence of any defect excepting the occurrence of these attacks.

Under the circumstances, every other resource having failed, I suggested that the surgeon cut down on the motor area, or somewhat anterior to the motor area of the brain, and at the level of the middle third, on the possibility of there having been some injury of the frontal region that had encroached on the arm center at the time, and then had healed. We cut down and found a cyst about the size of a pigeon's egg lying right on the posterior part of the second frontal convolution, forward of the motor zone. There had been no epileptic manifestations, by the way, whatever, and it was purely a lucky find. The walls of the cyst were carefully removed, and evidently the man had had a slow hemorrhage occurring from a vein of the pia mater at the time of his injury, and that hemorrhage had organized and gone on to the formation of the cyst. The cyst had lain there and apparently had given rise to occasional symptoms of pressure, probably owing to some variation in the circulation and some occasional condition in the cyst that gave rise to these attacks of mania from which he is now perfectly well.

I will not describe the third case, but I will say that not only in my experience in these three cases, but also in a number of other cases of traumatic insanity, I have seen symptoms of insanity irregular in type, which do not correspond to classical types of insanity as shown in the text-books at all.

DR. A. C. BRUSH, Brooklyn: These cases do not correspond to the classical description in the text-books. To a man dealing as I do with corporations it is embarrassing to have certain text-books put before one which purport to cover the whole ground and yet do not state the truth. This field of litigation is very important, and it is doing more to discredit us than anything in the world, with the general public and the courts, and it is time that our ideas were clearly defined on the subject.

Literature of Obstetrics in Mexico.—N. Leon has been compiling the bibliography on obstetrics in Mexican literature. His compilation has been published serially, running through several numbers of the *Cronica Medica Mexicana*, listing a total of 696 articles or books. The title of each is given in full, with source, the whole arranged alphabetically by authors and concluded in the issue for September 1, 1909.

PELLAGRA IN VIRGINIA

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In a recent article, Wood[1] makes the statement that no cases of pellagra have been reported from Virginia or Ohio, although these states furnish a large portion of the corn consumed in a section of the country from which he has been able to report a number of cases. That genuine pellagra may occur in Virginia, however, I believe the following case will bear witness:

Patient.—H. A. S., London Bridge, Va., aged 56, white, widower, occupation milling and farming, was born in Charlotte county, Virginia, reared in Pittsylvania county, and remained there the greater part of the time till February, 1909, when he moved to Princess Anne County, Virginia. He had spent a year each in Roanoke and Lynchburg, Va., where financial reverses made him poor. He had also spent three years in Nebraska and then returned to Virginia.

Family History.—The patient's father was killed in an accident at the age of 48; his mother died of old age at 84. Two brothers are living and well. Two brothers are dead; one of "Bright's disease," the other of "brain fever." Five sisters are living and well. One died when 3 years old of whooping cough. There is no history of cancer, tuberculosis, rheumatism, or insanity in any member of the family. The patient's father and two of his brothers always suffered from diarrhea whenever they ate bread made from corn-meal.

Personal History.—During childhood the patient had diphtheria, measles, mumps, and whooping cough. He had typhoid at 18, malaria and gonorrhea at 26, grip at 35. Since 35 he has always been well till the present illness. He has noticed that bread made from corn-meal always disagreed with him, even in childhood, producing diarrhea and intense intestinal pain. His father and two of his brothers, as above stated, were also similarly affected by corn-meal bread, but he has no knowledge that any of them ever suffered with roughness and desquamating of the skin at any time. His average weight is 145 pounds. He uses tobacco and alcohol moderately. He is the father of seven children, all of whom are dead. The second child died at the age of 13. His wife died sixteen years ago. They lived together eighteen years. He denies lues.

Present Illness.—The patient is now a very poor man and for the last three years has been living in cheap boarding-houses or keeping bachelor's quarters in which he did his own cooking. During the latter part of last fall, owing to the scarcity of work and the high price of flour, he was compelled to eat more and more corn-meal. About the middle of last December his present diarrhea began, very mild at first, but slowly and steadily increasing in intensity till about six weeks ago, when he had from ten to twelve movements per day, with agonizing tenesmus and distressful abdominal pain and nausea. For the last month he has ceased to use corn-meal in any form and the diarrhea has considerably abated. Since December he has lost about thirty-five pounds in weight and has been reduced from a robust, virile, workingman to a puny, weak, sickly individual, to whom life itself is almost a burden. About ten weeks ago, while picking strawberries, the back of his neck became red and burned, as if sun-burnt. At the same time he suffered with intense headache which was confined to the region "behind his ears and extended across from ear to ear." This continued for about ten days. During this period the skin on the back of his neck began to peel off. About the same time the skin over the bridge of his nose and the side of his face, after having been red and painful, likewise began to desquamate in small and large dry scales and bran-like particles. About six weeks ago the skin on the back of his hands began to look as if they were blistered, being swollen, red and painful, and scattered vesicles filled with serous exudate were formed. The surface then became quite dry and hardened, cracking at all the joints and in between the fingers. Both hands were similarly affected and about the same extent of surface on each involved. In about a week the skin on the back of the hands, fingers and lower one-third of his forearms began to desquamate in the same manner as that on his neck and nose. About the same time all of the toes of both feet became swollen and red. They burned slightly and itched in a most intense manner. This, however, disappeared within a week and there was never any induration of desquamation of any portion of the skin. About five weeks ago the gums of his upper jaw became swollen and red. There was slight salivation for a few days but this soon disappeared and has not since recurred. Since December he has vomited only once, that he remembers, but has repeated attacks of nausea every day. During the last ten weeks he has had repeated attacks of vertigo; often becomes dizzy on rising from a sitting to a standing position, or on rising from a recumbent position, and everything becomes black before his eyes.

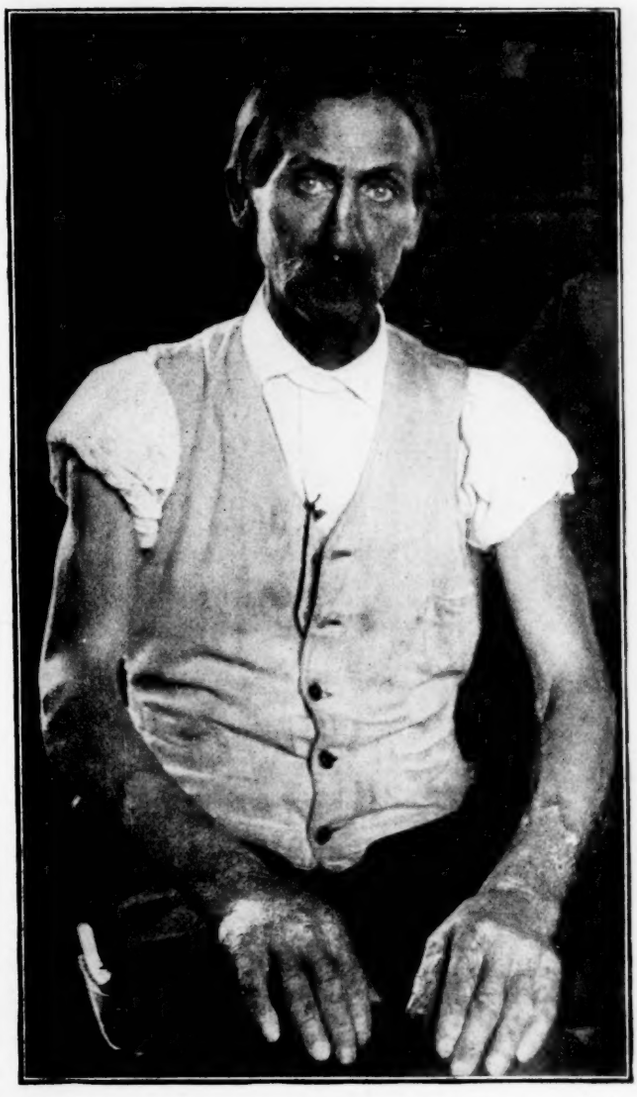

Fig. 1.—Patient with pellagra, showing the apathetic, smile-forgotten expression of the face and the extent of the lesion on the hands.

Examination.—General: The patient is a moderately emaciated white man, well advanced in years, with a very apathetic, listless appearance. He answers questions in a slow, whining monotone. He is sitting up and is able to walk around to a limited extent; however, his gait is slow and he is evidently very weak. He gives a slight groan with each expiration and appears to be in great distress. His hair is lusterless, dry and straight. The eyes react sluggishly to light and accommodation. All of the upper teeth have been removed. The lower teeth all show more or less marked decay. Pyorrhea alveolaris is quite extensive. Respiration is slightly labored. The skin everywhere has a muddy pallor. The heart, lungs and thorax

1. Wood, E. J.: Pellagra in the United States, THE JOURNAL A. M. A., July 24, 1909, liii, 274.

show nothing abnormal. The abdomen is scaphoid in shape. The liver, spleen and kidneys are not palpable. The deep reflexes of the upper and lower extremities are increased. Plantar stimulation gives a slight dorsal flexion of the great toe. No patellar nor ankle clonus can be obtained. There is no Romberg's sign, but slight tremor on protruding the tongue. The patient gives no history of urinary trouble at any period of his life, though for the past four months he has had to get up once or twice every night to micturate, otherwise, negative. Freshly voided urine shows a specific gravity of 1032; deep amber color; sugar and albumin, negative.

Skin: Over the back of the neck, extending upward to the hair line and downward to the level of the upper border of the soft shirt collar, the skin is of a dirty rose-pink color and everywhere covered with small and medium-sized patches of dry exfoliating epidermis. This superficial epidermis may be easily removed and no bleeding points remain. The same appearance and condition may be noted on each side of the neck, extending as far forward as the anterior border of the sternocleidomastoid muscle. Similar areas over the cheeks, sides and bridge of the nose, and the lateral aspect of the forehead, fuse and become continuous with these areas on the neck. The symmetrical situation of these lesions on each side of the head is marked. Over each side of nose, especially marked in the region of the alæ nasi, there appears a hypersecretion of the

Fig. 2.—Hand of patient, showing the rough, cracked surface and the desquamation of the epidermis.

sebaceous glands. The orifice of each gland, filled with grayish-white sebaceous material, gives the skin a white stippled appearance. The surface of the skin over these areas is quite dry and rough to the touch. In certain places there is a small amount of sebaceous exudate attached to the plaques of dead epidermis, giving them the character of thin crusts. Along the lower of the areas on the neck and the upper margin of the areas on the forehead there is a line of intensified brownish pigmentation. The margins of these roughened areas is everywhere sharp and well defined. Symmetrically situated on each side of the neck, just below the lower margin of the roughened area, is a lenticular-shaped area of deeply reddened skin over which the superficial skin appears shriveled. These areas, the patient tells me, have appeared in the last few days and have the same appearance as the large areas when they were first noticed. The mucous membranes of the lips and conjunctivæ are pale but moist. The skin over the chin and the anterior portion of the neck appears pale and slightly tanned, but otherwise normal. Over the sternum, on the right side, there is a lozenge-shaped area, measuring about 5 by 2 cm.; beginning above at the sternoclavicular articulation and extending downward and inward to a level of the upper border of the third rib, there is a brownish pigmented area of desquamating epidermis. On the left there is a similar area but smaller. Symmetrically situated on each shoulder, over the acromial process, the spine of the scapula, and the infraspinous fossa, the skin is roughened, harsh, scaly, and covered with numerous patches of brownish, desquamating epidermis. The skin underlying all of these areas is pale, slightly thinned, and very dry and rough. There are also similar areas symmetrically situated over each deltoid and each triceps muscle. The skin over each olecranon process shows the same appearance as that noted above, i. e., a dry, harsh, desquamating superficial skin and a dry, pale, slightly thinned underlying skin; but after exposure to the sun for a few minutes, as was done when I attempted to photograph the patient's hands, the underlying skin assumed a rose-pink color, similar to that to be described over the hands and arms. The whole surface of both hands, especially the backs of the fingers and hands, and the lower one-third of both arms are everywhere quite rough and scaly. The skin of the dorsum of the hands, wrists and lower portion of the forearms is of a diffuse erythematous rose-pink color. Scattered over these areas are innumerable small and large patches and plaques of dried and desquamating epidermis. Along all the natural furrows of the hands and wrists, at the interphalangeal joints, and in between the fingers there are deep cracks. These cracks, the patient tells me, were much deeper a few weeks ago. They were also at that time more painful and tender and would often bleed after slight injury. Only a few of them now extend through the true skin and they are all healing rapidly. The skin over the sides of the fingers and the backs of several of the interphalangeal joints is markedly thickened and has the appearance of the surface of a saw file. The skin on the palms of the hands is pale but the superficial layer is dry and harsh to the touch. In places it may be peeled off in large thick plaques, leaving a comparatively normal subjacent skin. The line of separation between the affected and the non-affected skin is sharp and well defined.

Mentality: The lady of the house tells me that the patient often has fits of extreme irritability when nothing can be done

Fig. 3.—Wrist of patient, showing the pigmented border and the sharp line of demarcation between the normal and the unhealthy skin.

to please him and he is extremely fault-finding and quarrelsome. He shows complete orientation and can remember dates and events accurately but has to think over many of them for a considerable time. He can perform simple problems in arithmetic but with none of the accuracy or rapidity that might be expected of one who had once controlled a business house with a capital stock of $5,000, as he once did, according to his story. He complains of difficulty in buttoning his shirt and coat, but this is most probably due to the anesthesia produced by the drying and desquamation of the superficial skin over the tips of his fingers.

Diagnosis.—So far as I can interpret the cases and photographs of this affection that have been presented in the recent literature the group of symptoms and signs in this case point most strongly to its being pellagra. The signs and symptoms, reviewed briefly, are these: (1) A persistent diarrhea, presumably originating from the eating of corn-meal; (2) a subsequent erythema of certain symmetrically situated and well-defined areas of the skin, followed by slight pigmentation, desiccation and exfoliation, accompanied by severe occipital pain, vertigo, and dizziness; (3) a weak mentality and central nervous system. The fact that the patient is now recovering rapidly would place the case in the class called by Thayer[2] "a milder chronic and commonly recurrent malady."

Pellagra has been recently reported[2] from Maryland, and a number of cases have for some time been under

2. Thayer: Bull. Johns Hopkins Hosp., xx, No. 220.

observation in North Carolina;[1] accordingly, from a geographic or climatologic standpoint, there is no reason why a certain number of cases should not also exist in this state.

The part played by corn-meal in the etiology of this malady is, of course, still a matter of conjecture. But it does seem to me a point worth consideration that this patient had noticed that the eating of corn-bread always disagreed with him, so much so that he avoided eating it as much as possible and, furthermore, attributed his present condition to this article of food. Moreover, his father and two of his brothers were similarly affected by a corn-meal diet and, likewise, always avoided it. None of them, however, so far as the patient has any knowledge, were ever affected with any cutaneous disturbances similar to his. It would manifestly be very interesting to know if any of the other cases that have been reported can furnish anything to corroborate or disprove the conclusions this case might tend to establish. I am aware, however, of the fact that a case has been reported in which the patient denied ever having eaten corn-bread, corn-flakes, or hominy.

If corn-meal and its consumption has any etiologic relation to pellagra and if wheat retains its present high price, we may certainly expect an increasing number of these cases to appear, particularly, in certain regions of our country where the people are exceedingly poor and where wheat is not a staple product.

PELLAGRA

ITS OCCURRENCE IN THE COOK COUNTY INSTITUTIONS

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In the following paper I wish to report the occurrence of pellagra in fourteen patients of the Cook County Institutions, Dunning, Ill. Eleven were inmates of the Hospital for the Insane, one of the Hospital for Consumptives and two of the Infirmary.

The first case was observed in August, 1908, when the diagnosis of pellagra was as yet not made. With the subsequent occurrence of three other cases presenting the same symptomatology, course and fatal outcome, not being familiar with the occurrence of pellagra in the United States, we came to the conclusion that we were dealing with a clearly defined disease. A clue to the nature of these cases was offered in the description of pellagrous insanity in Bianchi's "Psychiatry." From the onset, the next case was thought to follow closely the description of Italian pellagra, but it was not until the inquiry of the South Carolina State Board of Health was addressed to us that the diagnosis of pellagra was definitely made.

In view of the prevalence of pellagra in the Southern states of North Carolina, South Carolina, Georgia, Alabama, Tennessee, etc., and in view of the fact that this disease existed in those states for twenty or thirty years before being properly diagnosed, the importance of its recognition in other parts of the United States is self-evident.

The reports of its occurrence in the Northern states, as accurately as can be determined from the literature and from replies to letters of inquiry concerning its prevalence addressed by C. F. Williams, Secretary, South Carolina State Board of Health, to the superintendents of the state hospitals in the United States, have been limited to the following:

Two cases reported by Gray of Utica, N. Y., and Tyler of Somerville, Mass., in 1864.

Two cases reported by Thayer of Baltimore, Md., in 1909.

One case in Pennsylvania.

Few cases in New York.

One or two cases in Maryland.

This relative infrequency of pellagra in the Northern states gives special importance to its occurrence in Illinois.

Following the numerous recent reports on this condition, the description of the disease and the report of the Cook County cases will be made as concise as possible.

Pellagra was probably first recognized in Spain in 1735, when it was described by G. Casal, who termed the condition mal de rosa. It appeared in Italy in 1750. In 1771 Frappoli called attention to this condition in Lombardy, where the peasants called it pell' agra. About 1810 Marzari called attention to the relation between maize and pellagra, and in 1844 Balardini first suggested that the disease might be due to the ingestion of diseased corn, which view has been confirmed and upheld by Lombroso.

The disease is prevalent in Roumania and Italy; in the latter there are about 100,000 patients, of which, according to Tuczek, 10 per cent. are mentally affected. In Roumania there are about 30,000 cases. The disease is also found in Spain and Upper Egypt, and cases are reported in Austria, Servia, Bulgaria, Africa, Mexico, South America, and lately in the United States.

The first to report pellagra in the United States were Gray of Utica, N. Y., and Tyler of Somerville, Mass., in 1864. Since that time there have been but few reports on this condition until recently. Since the report of Searcy of Alabama in 1907, there have been numerous contributions to the literature. Dr. C. H. Lavinder[1] has reported to the Surgeon-General a conservative estimate of 1,500 cases in the South since 1906.

Aside from the predisposing cause of alcoholism, previous illness, poor hygienic surroundings, poverty, venereal excess, etc., it is the accepted opinion of most Italian students that pellagra is a disease caused by the eating of spoiled maize, constituting an intoxication from the toxin produced by the growth of fungi in corn. There has lately been dissenting theories introduced, among the strongest of which is Sambon's, who presents numerous points against the maize theory. Suffice it to say that the etiology and the pathogenesis of pellagra is as yet an open question, but that corn may bear the same relation to pellagra as swamps do to malaria and yellow fever.

The pathology is not characteristic and may shortly be said to consist of changes of cachexia, such as wasting of the adipose and muscular tissue, fragilitas ossium, atrophy, fatty degeneration of the heart, liver, kidney and spleen, abnormal pigmentary deposits in the ganglionic cells, muscles of the heart, spleen and liver. Changes in the intestines consisting of atrophy of the muscular coat, hyperemia and ulceration.

The nervous system shows at times hyperemia, at other times anemia and edema, inflammatory changes in the coverings, degeneration in the lateral columns in the dorsal region and of the posterior columns in the cervical region. Lombroso says that the spinal cord changes remind one of incipient tabes.

The skin lesion shows (1) congestion, (2) thickening pigmentation, (3) atrophic thinning.

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1. Lavinder, C. H.: Public Health Reports, June, 1909, xxiv, No. 25.

Of the symptoms, those belonging to the alimentary tract, skin and nervous system are the most prominent, but will here be but briefly considered. The disease usually begins with gastrointestinal disturbances, followed by erythema of the skin, and later by nervous manifestations. The gastrointestinal disturbance manifests itself by nausea, sometimes vomiting, ptyalism, loss of appetite and, most important, by diarrhea. Stomatitis is one of the most marked and constant symptoms. The mucous membrane is red, apthous ulcers develop and patches of macerated epithelium exfoliate, leaving a raw surface beneath.

The cutaneous symptoms are characteristic; the lesion consists essentially of an erythema appearing symmetrically and usually on the exposed parts of the body, especially the extensor surfaces, backs of the hands, forearms, neck, etc. It begins with redness and some puffiness. The redness becomes more cyanotic and is sharply demarcated. The surface of the skin becomes dry, harsh and scaly, exfoliating in flakes or scales. In some cases bullæ occur and with severe desquamation leave large denuded surfaces. The skin afterward assumes a dark color, from plum to brownish black; cracks and fissures form. After desquamation the skin appears thin and atrophied, with superficial wrinkles, at times having an appearance of striæ. The lesion is always sharply demarcated and on the hand usually leaves the distal phalanges uninvolved, ending at about the middle third of the forearm, seldom extending to the flexor surface.

Among the mental and nervous symptoms may be mentioned vertigo, neuralgia, partial paralysis, tetany-like conditions, tremors with variability of deep reflexes from increased to diminished and lost. Psychical manifestations usually take the form of melancholia, but maniacal attacks may occur.

Fig. 1.—Hands of patient 13.

The disease is essentially of chronic nature, in some cases lasting for twenty years, interspersed with spring exacerbations; it is met with in acute and chronic conditions. The acute, which is most commonly observed in the United States, is often fatal, running its course in a few weeks, but probably should not be called "acute pellagra" inasmuch as it is possible that it is but an acute exacerbation of a chronic process.

In the diagnosis of this condition there may be considered the various grain and food poisonings, lichen and similar skin lesions, scurvy, leprosy and beriberi, etc.

The prognosis is usually serious and the mortality in the United States unusually high.

The treatment up to date has been of little avail. Removal of corn from the diet and substitution of a nutritious diet of medicinal remedies—all have been of small benefit. Arsenic, quinin, strychnin and iron have been used; of late atoxyl has been vaunted as a cure, but the probability is that it, too, is of little avail.

From the cases arising in this institution the following interesting facts may be determined:

The entire number was fourteen:

Females, 10; all insane.

Males, 4; 1 insane; 2 in the poorhouse, 1 in the hospital for tuberculosis.

The duration of the fatal cases averaged 37 days.

The duration in the remaining cases averaged 34 days.

The nativity was as follows:

United States	5
England	1
Ireland	3
Bulgaria	1
Germany	2
Denmark	1
Unknown	1

Fig. 2.—Patient 14.

Of those foreign, the Bulgarian was in this country six months. The others ranged from eight to thirty years. They had been confined in the institution from one to twelve years.

Their psychoses at time of admission were as follows:

Dementia paralytica	3
Alcoholic	1
Dementia præcox	2
Paranoia	3
Acute confusional	1
Melancholia	1

The symptomatology has been fairly uniform, all presenting the syndrome of stomatitis, dermatitis, and diarrhea. The cases had an onset with some malaise, indifference, and loss of appetite; they exhibited during the course some ptyalism, progressive weakness, choreiform movements, mental symptoms of depression to stupidity, and increasing dementia., refusal to eat, and in some cases dysarthria and dysphagia. Of the patients who died, one died of apoplectiform convul-

sions of dementia paralytica, one in a low muttering delirum, associated with stupor and choreiform movements, one of respiratory failure, one probably of pneumonic tuberculosis, and one of inanition of carcinoma of the stomach; the others of exhaustion.

The treatment in the first six fatal cases did not include arsenic. In the later cases arsenic was given hypodermically in the shape of Fowlers solution, omitting the compound tincture of lavender. The course in these later cases has not been so severe and the results are slightly promising.

The pathology of those cases in which we were able to obtain postmortem examinations will be described for the most part in gross as we have as yet not examined sufficiently fully the microscopic findings to report in this article.

CASE 1.—L. F., female, admitted May 29, 1907, aged 38, born in the United States. Physical condition on admittance good. Psychosis, paranoia. Previous history negative. Mental status previous to onset of pellagra that of systematized delusions of persecution by spirits and hallucinations of hearing.

May 6, 1908: Patient developed a dermatitis of hands, face and neck. With the onset of the skin condition the patient became irritable and suspicious and failed physically rapidly.

Aug. 15, 1908: Skin had become brawny and thickened, covered with whitish scales. Patient had become untidy.

Aug. 24, 1908: Patient developed a slight endocarditis. Breath was fetid; mouth and teeth well covered with scaly layer of putrid material. Patient had a slight evening fever; died of acute endocarditis.

CASE 2.—A. C., female, admitted 1903, aged 34, born in the United States. Former admission in 1902. Physical condition on admission good. Psychosis paranoia. Mental state that of systematized delusions and poor emotional control; vicious and revengeful. Until 1908 condition remained unchanged.

Oct. 23, 1908: Patient had been failing lately and had developed frequent attacks of diarrhea. A scaly condition of the hands had appeared. Patient was losing weight; had become untidy and greatly demented.

Oct. 29, 1908: Dermatitis was now well marked, symmetrical, hard, reddened and scaly, having sharply defined borders, appearing on the backs of the hands and neck. Patient refused food and had a severe stomatitis.

After presenting a progressive course of increasing weakness, diarrhea, stomatitis, with increasing dementia and untidiness, patient died on Nov. 19, 1908, of exhaustion.

CASE 3.—M. R., female, admitted May 24, 1906, aged 32, born in Ireland; physically, suffering with chorea; otherwise in good condition. Psychosis acute confusional insanity. Mental condition that of restless confusion.

Sept. 28, 1908: Patient had been failing in flesh lately; had become very destructive and much demented. Skin showed a dermatitis of hands and face which was symmetrical in distribution. After running a course of increasing weakness with diarrhea and dermatitis, patient died on Oct. 10, 1908, of exhaustion.

CASE 4.—M. A., female, admitted April 9, 1908, aged 45, born in the United States. Physical condition that of paresis. Psychosis dementia paralytica.

May 26, 1908: Patient failing mentally and physically; was generally weak, dull and apathetic.

Oct. 27, 1908: Patient had many stuporous attacks lately; had become very untidy. A symmetrical dermatitis developed on dorsal surfaces of the hands, which were hardened, pigmented and fissured. The face showed a marked seborrheic condition; a vaginitis was likewise present.

Nov. 11, 1908: Patient had developed a severe diarrhea and stomatitis; had irregularly occurring attacks of vomiting and was gradually failing.

Nov. 29, 1908: Patient had an apoplectiform convulsion of the right side; developed edema of the lungs and died.

CASE 5.—M. F., female, admitted March 1, 1897, born in Ireland. Physical condition on admission, good. Psychosis melancholia. History negative except for the patient having used a great amount of alcohol.

December, 1905: Physical condition good. Patient had numerous delusions of persecution.

Feb. 27, 1909: Patient had been failing in health lately and had become rather unsteady in her gait.

March 20, 1909: Patient had developed a dermatitis of both hands, the dorsal surfaces of which were symmetrically hardened and fissured. Patient was becoming more demented.

March 27, 1909: Patient was in a semistuporous condition; had marked dysarthria and dysphagia, marked stomatitis, teeth covered with sordes. Ptyalism was marked. Patient exhibited incoordinate movements of upper extremities and an inability to stand. There were no paralyses; knee-jerks were absent; plantar reflexes normal, abdominal reflexes absent. Pupils were equal; reacted to light and accommodation. Electrical reactions were unchanged.

March 31, 1909: Patient had been having a slight evening fever with rapid pulse which was compressible and irregular.

April 14, 1909: Patient developed a diarrhea. Dermatitis was more marked; the skin was fissured, desquamation taking place, exposing raw red surfaces.

April 19, 1909: Patient, after having failed rapidly and exhibiting marked incoordinate movements of arms and legs, died.

CASE 6.—L. C., female, born in United States, aged 40, admitted May, 1904. Psychosis dementia præcox. Previous history negative. Physical condition on entrance negative. Psychically a low grade idiot.

January, 1908: Patient in fair physical condition.

June 7, 1909: For the past two weeks patient had developed a dermatitis of both hands, face and neck, which began as an erythema, becoming hardened, scaling, leaving the exposed surface moist. The lesion was symmetrical, involving the dorsal surfaces of the hands and wrists and a butterfly-like involvement of the face spreading from the nose and one patch over each sternocleidomastoid. The patient was in poor general condition; had a general adenopathy. Heart and lungs negative. Nystagmus on lateral movements of the eyes. A double Oppenheim and Gordon but no Babinski. Knee-jerks were increased; a double ankle-clonus and knee-clonus were present. Active movements of both upper and lower extremities were negative. Passive movements were negative except for a double Kernig's sign.

June 9, 1908: Patient, after lying in a semicomatose condition for the past two days, died of respiratory failure, after having once been resuscitated by artificial respiration.

CASE 7.—E. S., female, born in Germany, admitted October, 1908, aged 28. Physical condition on admission good. Psychosis dementia præcox. General mental status previous to onset of pellagra that of depression, refusal to eat, and fear.

June, 1909: Patient had become more demented and was fed with great difficulty. Physical condition about the same.

July 5, 1909: Patient had developed a symmetrical dermatitis of the dorsums of both hands and wrists. The lesion over the hands consisted of a sharply demarcated thickening and redness and scaling, leaving a glazed surface exposed. There was a similar lesion over the back of the neck. A moderate stomatitis was present, consisting of excoriations with the presence of several small whitish ulcerations. The epithelium was piled up and desquamating. The tongue was red and glazed, the papillæ were prominent. Heart and lungs were negative. Patient had slight diarrhea and was very weak. Mentally, she was much depressed and cried a great deal.

July 12, 1909: Patient had during the past week been failing rapidly. The stomatitis was worse, the dermatitis stationary. Ptyalism was marked and dysphagia and dysarthria were present. Patient complained of burning pain extending from her throat to her stomach; had a slight evening fever.

Aug. 1, 1908: Patient was beginning to improve; stomatitis was less severe. The slight diarrhea that was present had disappeared and the skin lesion was fading away.

August, 1909: Patient continued to improve; diarrhea had disappeared, stomatitis subsided and patient was much more cheerful, taking nourishment willingly.

CASE 8.—F. S., female, born in the United States, admitted June, 1908; aged 30; married. Physical condition on admission good. Psychosis dementia paralytica.

June, 1909: Patient complained of pain in the stomach and loss of appetite; had a slight redness of the skin of the hands.

July, 1909: Patient had a symmetrical dermatitis of both hands, one patch on each side of the neck, moderate stomatitis and a slight diarrhea. After running a slight course of diarrhea, with progressing weakness, she began to improve, the depression being replaced by exaltation, the skin lesion disappearing and the stomatitis subsiding.

CASE 9.—M. O'D., female, admitted April, 1909, aged 32, born in England. Physical condition on admission poor; marked anemia. Psychical diagnosis, dementia paralytica. General mental condition before onset of pellagra, marked depression, confusion and emotional instability.

July 1, 1909: Patient had become very resistive; refused food, had failed physically.

July 5, 1909: Patient had developed a symmetrical dermatitis of both hands and wrists; a similar condition was present on the sides of the neck. There was a marked stomatitis; slight diarrhea was present. Knee-jerks were exaggerated. Patient refused food and had to be tube-fed. Lungs showed slight dulness in both apices with roughened breath sounds but no râles.

July 18, 1909: Patient was rapidly failing. Stomatitis was very severe. The skin lesion was, however, becoming less marked. All the glands were enlarged. The diarrhea had subsided. Patient remained resistive and refused food.

July 29, 1909: After having progressively failed, despite the improvement in the condition of the skin and mouth, patient had developed signs of a pneumonic infiltration of the right lung with high temperature, rapid respiration and rapid weak pulse, and died on Aug. 1, 1909.

Postmortem Examination.—An extremely emaciated woman. Inguinal glands enlarged; abdominal cavity free from fluid; adhesions surrounding gall-bladder extending to the pylorus, duodenum and transverse colon; adhesions between spleen and parietal peritoneum and between uterus and rectum. Left pleural cavity free from adhesions; right pleura firmly adherent to lung; pericardial cavity contained 15 c.c. of clear fluid; left heart contained a goose-fat clot. Heart practically negative. Lungs: Right upper lobe showed solidification, with old cavity formation. The wall of this was in some places gangrenous and in others cheesy; and the remainder of the lobe contained a large amount of fibrous tissue. The middle lobe and lower lobe showed marked consolidation. The left lung was emphysematous and contained patches of fibrosis. Liver showed some fatty changes. An accessory spleen was present; spleen showed scattered hemorrhage spots. Pancreas was negative. Kidneys were very pale, 260 gm.; glomeruli white and glistening. Stellate veins showed prominently; pyramids pale with considerable fibrous tissue. Aorta showed several ulcerated plaques in descending portion of the arch. Small intestines showed Peyer's patches to be rather plain. In the large intestine the mucosa was injected, otherwise negative. The mesenteric glands were enlarged. Left ovary cystic. Dura mater negative. Small amount of cerebrospinal fluid; no granulations in the fourth ventricle; very little edema of the pia mater. Along the posterior border of the dura from the third dorsal to the mid-lumbar was collection of half-organized material, yellowish in color, with several small hemorrhage spots.

CASE 10.—M. W., female, admitted March 8, 1908, aged 46, married, born in Germany. Physical condition on admission fair. Psychosis paranoia. History negative.

Dec. 9, 1908: Patient showed on examination a partial heart-block and an infiltration of both apices. The sputum, however, did not show the presence of tubercle bacilli.

Aug. 6, 1909: Patient developed a symmetrical dermatitis of both hands, with the onset of malaise, loss of appetite and stomatitis. Patient also had a slight diarrhea.

Aug. 13, 1909: The patient was greatly improved. The skin lesion was clearing up and the stomatitis had disappeared.

CASE 11.—J. McC., male, admitted June 1, 1905, aged 40, born in Ireland; lived in the United States for twenty-two years. Physical condition on admission good. Psychosis alcoholic insanity. History negative, except for being an excessive alcohol user and having had caisson disease several times. Patient after admittance had an annual attack of diarrhea, not of great severity and lasting but a short time.

July 29, 1909: Following a slight attack of diarrhea, patient developed a slight redness and scaling over the knuckles of both hands. This lesion extended over the dorsal surfaces of both hands and, although not involving a great area, the distribution and its typical appearance left no doubt as to the diagnosis of pellagra.

Aug. 15, 1909: Patient was much better, the skin lesion was disappearing and the diarrhea had subsided.

CASE 12.—W. G., male, patient of the poorhouse, admitted 1902, aged 60, born in Denmark. Previous history negative.

May, 1909: Patient developed diarrhea which lasted off and on until July 15 when he noticed a scaling of the backs of both hands. For the following three weeks the diarrhea was of very severe nature; the dermatitis increased in severity and stomatitis developed.

Aug. 8, 1909: The dermatitis was symmetrical, involving the dorsal surfaces of both hands and wrists; there was scaling and thickening. The diarrhea was not so severe and patient was comfortable.

Aug. 21, 1909: Patient was up out of bed; the dermatitis had disappeared, leaving a slightly pigmented, scaly skin; diarrhea was absent.

CASE 13.—F. B., male, poorhouse patient, admitted Aug. 11, 1909, in a semicomatose condition, suffering with pellagra; aged 65; painter by occupation. Nativity unknown.

When admitted patient had a symmetrical involvement of both hands and arms by a dermatitis characterized by a brawny induration and redness with some scaling. The patient stated that previous to his admission he suffered with loss of appetite and abdominal pains. Since that time he had had loose but infrequent bowel movements, is failing rapidly and is in a very clouded state of mind. Besides the lesion on his hands there is a slight abrasion of skin over both ankles. He has marked rigidity in both upper extremities and his movements are decidely incoordinate. Knee-jerks are exaggerated, elbow-jerks and wrist-jerks are exaggerated.

CASE 14.—S. J., male, patient in the Hospital for Consumptives; Bulgarian; in the United States seven months; admitted to the institution June 18, 1909; aged 38. About three weeks after admission to the hospital it was noticed that the patient had a symmetrical dermatitis of the dorsal surfaces of both hands and wrists which were red, rough and swollen. There was also present a well-marked stomatitis and salivation. The tongue was red and the papillæ were prominent. The patient was suffering from carcinoma of the stomach and showed an abdominal scar from an operation. He could not retain his food and was rapidly failing.

He died Aug. 3, 1909, of inanition from carcinoma of the stomach.

Postmortem Examination.—This showed cyanotic induration of both lungs with areas of bronchopneumonia. The stomach, large and small intestines and the spleen and liver were matted together in a mass by old and very firm adhesions. When these were cut through, there was found a large medullary carcinoma of the stomach involving the larger part of the anterior and posterior surfaces and the curvatures of the stomach, and surrounding and almost occluding the pylorus. The liver, kidneys and intestines, heart and spleen were negative. The cerebrospinal system was likewise negative to the naked eye.

In conclusion, it may be proper to mention a few of the differences pointed out by Babcock[2] between the pellagra of the United States and the Italian pellagra; in the United States the notable points are:

1. Overwhelming number of women attacked.
2. Great mortality of the disease.
3. Invasion of unexposed portions of the body by the dermatitis.

Recognizing the futility of treatment and the prevalence and apparent progression of pellagra in the United States and realizing the enormous food value of corn, it can readily be seen that the subject is one of greatest

2. Babcock, J. W.: Jour. South Carolina Med. Assn., February, 1908, Vol. iv.

importance and deserves the deepest study and research. I am indebted to much of the recent literature on this subject for material for this report. A complete bibliography of the literature in the United States may be found in the Public Health Report of June 18, 1909.

I am indebted to Dr. Hamill and Dr. Moore for their kindness in permitting me to use their cases.

LAKE MICHIGAN WATER FOR DRINKING PURPOSES*

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Lake Michigan occupies a hole scooped out by glacial ice. It is not a natural valley, and in consequence the rivers which drain into it are short and discharge very little water. This is true of the south end and the west shore. On the east shore the St. Joseph, Grand, Muskegon and Manistee are fairly long and carry a fair volume of water. The first two of these drain rather populous areas and their waters reach the lake quite polluted. The banks are seldom sloping and the drainage of storm water does not run directly into the lake except for the distance of a few feet back from the water-line. These factors protect the lake against pollution and therefore argue for the use of its waters for drinking. It is a soft, fresh water and cold.

The other side is this: Counting Chicago, 2,000,000 people either live on the shores or so near thereto that their sewage reaches the lake after a short flow. Just now this population is increasing at the rate of 100,000 a year. In no single instance is any of this sewage properly treated before being discharged and in but few instances is it treated at all.

The tonnage of Lake Michigan shipping is very heavy. The ships carry both freight and passengers. The excursion business between Chicago, Milwaukee, St. Joseph, Benton Harbor and Michigan City is very heavy. A single ship will carry from a few hundred to a few thousand passengers, and the water intakes are usually steering points. Near the water intakes are the points of maximum discharge of feces and urine, as none of these ships have holding devices, or rules as to the closing of closets, and the zones around the intakes are not restricted navigation zones. These waters are more dangerous than salt waters, in that the same water is used for sewage, navigation and drinking purposes. They are less dangerous than ocean waters in that we do not have the shore and wharf pollution action of the tides. The soft waters differ from the salt waters in their action on sewage and different trade wastes. Our fresh water *per se* has no restraining action on the growth of bacteria nor does it modify the chemistry of materials deposited therein.

The Chicago sewage from the south line of Evanston to Eighty-fifth Street on the south now flows into the drainage canal and thence ultimately into the Gulf of Mexico. South of Eighty-fifth Street we now have about 150,000 people whose sewage flows into the Calumet River and then after a short flow into the lake. This sewage is not purified before it is discharged into the river. The same stream also discharges the sewage of Hammond, Ind. (20,000); Whiting, Ind. (10,000); East Chicago and Indiana Harbor (20,000); Gary, Ind. (10,000). On account of the rapid growth of these just-over-the-line sources of contamination, it is safe to say that within five years the polluting popoulation will be 200,000. If we add to that the Calumet Valley population in Illinois, in five years we have 400,000 people. For all of these reasons raw sewage must be kept out of Lake Michigan.

The normal water of Lake Michigan twenty miles from shore contains eight bacteria per c.c. and no colon bacilli. There are no uniform currents in the south end of Lake Michigan. The surface current always flows with the wind. A flow of five to seven miles is not enough to purify a large volume of sewage. The time required for a flow of this distance is not enough for purification. The oxygen content of the water is not high enough to purify in this length of time. The saprophytic bacteria are less and less active as the medium is diluted with fresh water. Though a sewage stream holds together quite definitely for three to five miles, wave action limits the efficacy of sedimentation. There is not much fauna and still less flora in these waters.

Generally speaking, these soils of the communities just mentioned are underlaid by a deep stratum of strong sulphosaline water unfit for general drinking purposes. The shallower soil strata do not yield water enough to sustain large populations. The streams to the west and south are altogether insufficient for water purposes. The streams on the east shore are highly polluted. There are no mountains or other high places even fairly satisfactory for water reserve purposes. The waters of Lake Michigan must furnish the drinking-water for these large and growing cities. Therefore the waters must be kept pure.

Chicago has had a typhoid death rate of over 175 per 100,000. Last year it fell to 15.5. That was the lowest in the history of the city. The first five months of this year are lower than the corresponding portion of last year or any other year. The typhoid death rate of the other Lake Michigan cities is high—higher than the American average. The Milwaukee average for five years (1904-1908) was 21.9 per 100,000; Michigan City goes to 40; Hammond, Whiting, East Chicago and Gary range around 70, and some years 90 to 140. These are illustrations of averages around the lake. Escanaba, Grand Rapids, in Michigan, and Sheboygan in Wisconsin average quite high. Waukegan and Racine are far above the average. Therefore the condition is not remote and to be dreamed about. It is immediate and to be acted on.

Lake Michigan is the common charge of the national government, the state governments of Wisconsin, Illinois, Indiana, Michigan, and also of the large centers of population located on the shores.

Acting on a conception of these responsibilities in May of 1908 the Mayor of Chicago asked for the appointment of members of the Lake Michigan Water Commission on the following basis:

	Representatives.
The Public Health and Marine-Hospital Service	1
The Engineering Corps of the War Department	1
The State of Wisconsin	1
Milwaukee	2
Illinois	1
Chicago	3
Indiana	1
Indiana cities, located on Lake Michigan	1
Michigan	1
Grand Rapids, Mich.	1

The commission is now composed of Major Judson, Mr. Hill and Professor Sackett, engineers; Professors

*Read in the Section on Preventive Medicine and Public Health of the American Medical Association, at the Sixtieth Annual Session, held at Atlantic City, June, 1909.

Bartow and Barnard, state chemists working especially on water surveys; Dr. Gehrmann, bacteriologist; Dr. Young, Dr. Bading, Dr. Sutherland, Dr. Shumway, Dr. Evans, national, state and municipal health officers; and Mr. Becker, ex-mayor of Milwaukee. Lack of appropriations in Michigan have made it necessary for Dr. Shumway to withdraw.

Right speedily the importance of this matter impressed itself on the Chicago Association of Commerce. They called a meeting of representatives of the city governments and business bodies of the various towns located on or near the lake. Fifty-six cities responded. An organization was perfected. The object of this organization is to secure popular and governmental support for the policies advocated by the commission. The first body is for research; the last is to make effective the work of the first. This last organization is the Lake Michigan Sanitary Association. Out of these two organizations have grown two other loose organizations. The towns of northern Indiana have had joint meetings of their city governments and business bodies, first, to advance the study of their sewage disposals and water supplies, and, later to find remedies or a remedy, for up to now, at least, all of the towns are joining in a single movement. The towns north of Chicago, to wit, Evanston, Wilmette, Kenilworth, Winnetka, Glencoe, Highland Park, Lake Forest, Lake Bluff, North Chicago and Waukegan have united to study their situation.

The method of the Lake Michigan Water Commission is to hold about four meetings a year to which reports will be made. Up to now the meetings have been devoted largely to the study of existing conditions. We are just beginning to discuss remedies. The investigations are done by the state and municipal boards of health. Four meetings have been held. The following are the subjects treated in the first volume of reports:[1]

Call for the Commission.
Letter of Dr. Evans to Mayor Busse.
Letter of Mayor Busse to the Chicago City Council.
Action of the Chicago City Council.
Letter of Mayor Busse to Administrative Officers.
Minutes of the meeting of April 18, 1908, at Chicago, Ill.
Articles of organization.
Minutes of the meeting of May 27, 1908, at Grand Rapids, Mich.
Minutes of the meeting of Sept. 10, 1908, at Milwaukee.
Minutes of the meeting of Jan. 23, 1909, at Indiana Harbor, Ind.
Report on Water Conditions in Michigan, by Dr. Frank W. Shumway.
Report on Water Conditions in Indiana, by Dr. W. A. Evans.
Report on Water Conditions in Wisconsin, by Dr. Q. O. Sutherland.
Report on Water Conditions in Illinois, by Dr. Edward Bartow.
"Currents in Lake Michigan," by Major W. V. Judson.
Extracts from paper by J. A. Amyot.
"Sewage Disposal Problems," by Lederer and Hill.
"Investigation of a Typhoid-Fever Epidemic at Sheboygan, Wis.," by J. T. B. Bowlles.
"Methods of Analysis," edited by Edward Bartow.
Report of Conditions of the Chicago City Water-Supply, by Dr. J. F. Biehn.
Report of Milwaukee City Water-Supply, by W. V. Judson.
"Control of Shipping," by Dr. G. B. Young.
"The Character of the Water-Supply of Michigan City," by H. E. Barnard and J. H. Brewster.
"The Sanitary Condition of the Southern End of Lake Michigan Border—Lake County," by H. E. Barnard and J. H. Brewster.
Report on State Control of Waterways, by Dr. Frank W. Shumway.
Report on a Filtration Plant at the Union Stock Yards, Chicago, by Dr. Adolph Gehrmann.

The investigations of existing conditions relates to:

1. The typhoid death rate (mortality and morbidity).
2. The diarrheal rate in adults other than tuberculous diarrheas (mortality, but principally morbidity).
3. The degree of organic pollution of the waters.
   (a) In the taps.
   (b) At the intakes.
   (c) At various points in the lake.
4. The degree of bacterial pollution at
   (a) General; (b) colon.
      (a) The taps.
      (b) The intakes.
      (c) Various points in the lake.
5. The location of the intakes.
6. The location of the sewer outfalls, especially in relation to the water intakes.
7. The direction of Lake Michigan currents.
8. The purifying power of Lake Michigan water *in situ* and in the mains.

The commission is just beginning to study methods of sewage purification and the problems of the cities.

As usual Indiana leads. The report from Indiana is the most comprehensive and convincing of which I have any knowledge. The reports from Chicago are complete, but the report from the rest of the state is fragmentary. The Wisconsin reports are next in completeness. Michigan data are least complete. Few Michigan towns get their water out of the lake; many put their sewage in and several take their water from bodies of water that are practically portions of the lake.

Studies made by these cooperating bodies have demonstrated several things. Other things seem probable though not proved. As a result of study of the conditions largely gained from the work of this commission, I hold the following opinions:

1. Lake Michigan water twenty miles away from large sewer outfalls is good, safe drinking-water and excellent in quality.

2. On account of the large volume of water, its low chemical content, and its temperature, it will take care of shore population much in excess of that now existing.

3. The present conditions of the shore waters near all sewered towns are such as to render their use for drinking purposes dangerous.

4. South of an east-and-west line passing through Seventy-fifth Street in Chicago to a similar point in Indiana (an area of nearly 100 square miles) the water is either all so polluted or so frequently and so easily made so that no city should take its water-supply from it and no boat should be allowed to fill its drinking-water tanks from it.

5. There are no constant currents in Lake Michigan.

6. The currents in Lake Michigan are due to the direction of the wind. There is always a surface current with the wind and usually a deep current opposite to the direction of the wind.

7. Irregularities in shore contour, for example, bays or promontories, at times will operate to protect an intake; at other times will have no influence on the water at the intake; at times will operate to foul such water, according to the direction of the wind. For example, a bay protected by a natural or artificial promontory on the north, with the wind in one direction, will have bad water pushed out and good water pushed in; when the wind is in another direction the bad water would eddy around the intake.

1. Now ready for distribution.

8. In the Lake Michigan area there are no prevailing winds.

9. In Lake Michigan there are no prevailing currents.

10. As storms habitually stir Lake Michigan to a depth of 20 feet, frequently stir it to a depth of 40 feet and occasionally stir it to 60 feet, purification by sedimentation is not effective in water less than 50 feet deep in Lake Michigan.

11. As the highly effective saprophytes are not abundant in Lake Michigan, purification is by oxidation, dilution and sedimentation.

12. Therefore the rapidity of purification is not as great as it is in fouler waters with a high saprophytic bacterial count.

13. A flow of seven miles in Lake Michigan is not sufficient for the purification of a massive amount of sewage.

14. With a fairly high and steady wind sewage streams retain quite definite boundaries for several miles.

15. A flow of one mile in the lake is of greater purifying power than a like flow in a stream because of (a) the time required; (b) dilution. It is of lesser power because of (a) the less saprophytic bacterial count; (b) less oxygen absorption. Weighing both equations, one mile is more efficient in the lake, but a forty-mile requirement of river flow is not equaled by a one-mile lake flow.

16. Massive amounts of sewage containing much floating material will sometimes hold together in a definite lake stream for twenty miles.

17. No town should place its water intakes within 1 mile of the sewer outfall of a town of 2,000 inhabitants. This distance should increase *pari passu* with the number of inhabitants using the discharging sewers, other things being equal.

18. Dumping should not be allowed in water less than sixty feet deep in Lake Michigan.

19. Government navigation regulations should keep ships a certain distance from water intakes at all times. They should specify holding provisions, with dumping control on all streams. They should specify zones from which ship drinking-water should not be taken in all bodies of fresh water.

20. Properly controlled, Lake Michigan water will always be safe for drinking purposes.

21. Under present conditions no town is justified in using Lake Michigan water from a point nearer shore than one mile.

22. Large cities emptying their raw sewage into the lake should not take their water nearer any sewer outfall than ten miles.

23. What these states and cities bordering on Lake Michigan are trying to do should be done by the national government for the chain of lakes.

Growth of the Child.—Suitable conditions are absolutely essential to healthy growth, and are more important during infancy and childhood than even at any later period. We must allow time for growth, and not crowd back into childhood exercises suited only to more mature bodies and organs. The mental exercise which is play for the boy may be labor for the young child, and child-labor should be prohibited in our schools. Finally, organs grow and develop successively; first the visceral, vital organs; then the muscles; last of all the higher centers of thought and feeling in the brain. Our systems of education must conform to this order. That system is best and wisest which furnishes the conditions and stimuli needed at each stage to promote the growth or development of the organs most rapidly advancing during that epoch.—J. M. Tyler, in *Hygiene and Physical Education.*

THE ECONOMIC VALUE OF PROTECTING THE WATER-SUPPLIES *

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To conserve watercourses means to retain these resources in their natural condition, or in that condition which gives the greatest safety and utility to man. The pollution of a water-suppply is as unnecessary as the wanton butchering of wild animals or the reckless destruction of a forest; in either case the resource is partially or wholly obliterated, and the waste tends to destroy the available livelihood and comforts of the people. A polluted watercourse is not a natural stream.

Municipalities are not the only factors which are accountable for the pollution of public water-supplies. The influence of small villages, individual homes and factories on stream contamination needs more attention. The cities with more people and factories to a given area produce more pollution than the towns with their more numerous cesspools, yet the bacterial contamination is apt to be relatively less with a city, owing to the bactericidal activity of many factory wastes. The presence of disinfectant chemicals in sewage or in drinking-water is strictly objectionable if the sewage or water is to be subjected to filtration. Although in rural districts the more numerous privies cause relatively a less amount of direct stream contamination, the danger of pollution from individual houses can not be overlooked. That there is a great danger from rural communities is attested by the large epidemics which have been traced to individual cases of pollution. In the typhoid epidemics at Butler, Plymouth, New Haven, Nanticoke and Reading there were collectively 3,929 cases, with 361 deaths, resulting from the careless treatment of the discharges of but five individual patients.

The story of damage from epidemics resulting from polluted water is too well known to require repetition, save perhaps for an enumeration of the ways in which the pollution may occur, that the individual contaminating points may be sought and the danger averted. Epidemics from water-supplies result from contamination by various factors: the use of a raw water into which is continually discharged the sewage of other towns, as occurred at Pittsburg, Lawrence and Philadelphia; a city drinking the water of a lake which has become its own cesspool, as did Chicago, Cleveland and Burlington; pollution of the water by the wastes of individual houses, institutions or factories, as at Plymouth, and pollution from privies situated directly over the streams or on the banks, as at Ithaca, or indirect pollution of the stream after the offending matter has been deposited on the surface of the ground or in wells, later gaining access to the watercourse by the washing of rain or seepage through ground seams. In some instances epidemics originate through criminal thoughtlessness when a town has been already supplied with pure or purified water. A water-pipe laid through a polluted pond may become sufficiently disjointed to permit admission by the infected water, as occurred at Baraboo, Wis., and Palmerton, Pa. The admission of polluted water to a pure city supply at any time is inexcusable. Epidemics have originated at times of fire (Lawrence), through failure of valves to operate (Wilkinsburg, Pa.), when the ordinary supply was judged to

* Read in the Section on Preventive Medicine and Public Health of the American Medical Association, at the Sixtieth Annual Session, held at Atlantic City, June, 1909.

be insufficient and no public warning was given of the substitution (Newburyport), or when polluted water was furnished temporarily while the filter-plant was undergoing repair (Lowell, Mass., 1902, Brewer, Poughkeepsie, N. Y., and Millinocket, Me.). Various public wells becoming infected through ground seams have caused epidemics of typhoid fever, as at Trenton, Newport and Mount Savage, Md.

THE VALUE OF HUMAN LIFE

Various attempts have been made to determine the exact financial loss occasioned by the invasion of an epidemic or a polluted water-supply. It is possible to estimate the approximate saving of life through safeguarding the public interests; the approximate number of lives saved by the installation of a water filtration system may be easy. But to put on the credit column of the ledger page for comparison with the debit of the filtration plant the actual value of the lives saved, with the dollars saved in wages of the deceased people, is an utter impossibility. All attempts to place an exact cash loss caused by any fatal calamity have and must result in failure. In estimating the loss from a fire the cost of rebuilding and probable loss from earning capacity during the period of construction can be roughly figured, but the other factors, inconvenience, effect on prestige, result of public attention, loss of unforeseen opportunities, etc., can not be surmised. Equivalent conditions affect the estimation of the value of human life and the cost of sickness. In estimating the financial loss during the illness of an individual or number of individuals the cash loss to that individual may be computed, but not the loss to his employer. Much less can there be calculated the wage loss occurring through death. It is obviously impossible to estimate how long a man's income will continue, to what extent it will fluctuate, of what value that income will be to himself and his dependents, and how much of that income will be inherited by others. Rochard says that the economic value of an individual "is what he has cost his family, the community or the state for his living, development and education." To accept such a standard would be to declare that Abraham Lincoln was worthless.

A man's value is not to be estimated by his income or bank account alone, but by his real influence, morally, mentally and physically on his family and the people at large. The man who spends much of his spare time at home and gives much comfort to his family is obviously of more value than he who does little for his wife and children except to pay the rent and grocery bills; he who influences his own or other peoples' children to improve in morality, industry and citizenship is greater than he who has little regard for such activity; the man who actually earns his money is of more value than he who inherits his sustenance, yet their wills may dispose of similar estates. These conditions are but a few of the many which must be considered when estimating the true value of a human life, and plainly show the absurdity of attempting to put on paper the loss caused by death. The human life is valued at $25 by Galton, $219 by Rochard, $776 (159 pounds) by Farr, $976 (200 pounds) by Chadwick, $2,000 by E. F. Smith and $5,000 by some others. French soldiers are rated at $1,200. The average price of slaves sold in America was about $1,000. Such estimates are obviously too low for any practical purpose. The legal value of life is almost entirely dependent on the force of the plea of the counsel.

Another error in estimating the human value is in the choice of incidental expenses. For instance, Wing, in attempting a concrete study of the cost of typhoid fever to Pittsburg, added into the expense account the extra cost of milk and ice used for the patients, neglecting to subtract the money saved by restricting the diet. Funeral expenses, $3,186 for 26 deaths, were included—an obvious mistake, because they are necessary expenses which must come at some time. Should it become necessary, as it unfortunately frequently is, to use concrete figures to convince lawmakers and the public of the benefit to be derived by protecting the public health, recourse must be had to the financial loss through the prevalence of sickness, including a list of the number of deaths, with a brief on the general loss to the public and private citizens occasioned by the mortality.

In reaching the estimate of the financial loss occasioned by sickness the sum total of the individual cases must be considered. In this there should be included only the value of the medical attendance, cost of nursing, extra servants, hospital expenses, medicines, special apparatus or appliances bought, extra ice and difference in cost of food supply, to which is added the loss of wages calculated up to the time when the patient attains his original vigor and wage-earning capacity. To this money loss, credited to those that recover, is appended the simple statement of the number of deaths, without attempting to express their loss in dollars. For a very rough working hypothesis of the financial loss, if this be required, the loss may be estimated as double the wages lost through illness and convalescence, with a minimum average of $3 a day, added to a bald statement of the number of lives sacrificed. Those who control means for the safeguarding of human life should use, if need be, for the value of life the personal standard placed on their own families. It is, therefore, very misleading to attempt to employ any set figure as the value of human life.

POLLUTION BY FACTORY WASTES

Manufacturing plants are not a danger from their sewage alone, but their liquid wastes when discharged into watercourses are undoubtedly a damage which needs correcting. Factory wastes are not only a menace to the individuals consuming the water, but are a detriment to other mills and are destructive to fish. By discharging offensive wastes into streams, ponds or lakes the manufacturer disobeys the clearly enunciated, universal law of water rights which commands that factories must allow the water leaving their mills to be as pure as when they receive it; the riparian manufacturing proprietor may use the water in any manner as long as he does not interfere with the purity of the stream or with the rights of others below him. Because of this factory pollution there has resulted much litigation; old established mills have been badly affected by the new factories up-stream; paper mills have been ruined and others forced to seek new quarters. In Rhode Island a bleachery obtained an injunction against a wool-washing concern, with the result that now the discharged water is subjected to settling basins, treated with sulphuric acid, the extracted grease collected in bags, pressed hot and made into dégras for finishing leather. The effluent is subsequently run through a sand filter. Woolen-mills and print-works have obtained similar injunctions against other wool-washing works up-stream, and many paper-mills have been rightfully sued.

Chlorinated lime from paper or cotton bleacheries when discharged into a stream grossly polluted by sewage will act as a partial purifier through its disinfectant effect, but the quantities added are in such excess of what is needed that a poisoning of the water results. The indications are that chlorinated lime can not serve as a coagulant in the manner of slacked lime, and will, therefore, not settle to the bottom of a river. Leighton asserts that acid coal mine wastes are, bacteriologically, a benefit in the Susquehanna River.

POLLUTION DESTROYS FISH

The scarcity of food fish is largely due to the pollution of the streams. Some coarse fish apparently thrive near a sewer's mouth, but may be rapidly killed by a discharge of sulphuric acid or other waste. The destruction of fish by sewage-laden water is due to bacterial contamination, to various salts or to gases of decomposition, ammonia and sulphuretted hydrogen. Marsh is of the opinion that the exhaustion of the dissolved oxygen causes the fish mortality. The Passaic shad industry was utterly destroyed by pollution in the river. In many cases fish are destroyed by factory wastes. Dead fish were found in countless numbers after arsenated water was discharged once from a dye works. Sulphuretted hydrogen from starch works, lime from bleacheries, gluten from glucose works, coal-mine and culm bank washeries and decomposing animal matter are all causing enormous destruction of fish. Sawdust and wood pulp destroy trout and bass. The wastes from woodpulp mills, oil wells and gas factories make fish life impossible (Leighton, Marsh, Sweeney). The stocking of streams by the planting of young fry is frequently a failure because of water pollution. The fresh content of a stream may usually be regarded as a relative indication of objectional pollution, as the salt content is considered as a relative indicator of sewage.

The sewage and factory pollution of the streams, with the noxious odors and surface impurities, and with the resulting absence of the smaller fish, is an important factor in the scarcity of game and other birds on the shores. The same causes make it impossible for people to live near some streams or to water live stock therefrom. Realty values decrease markedly along streams which become polluted. Land along the Passaic River that commanded values of $500 to $800 an acre for farming a few years ago possessed no value at all in 1902.

Since factory pollution is frequent and easily visible, its presence may best be detected by those who are accustomed to visit the manufacturing plants. Factory inspection is a necessary requirement in every state and city, but it seems advisable to place it under the guidance and control of a state department of health; at least, the inspectors should be required to submit sanitary reports to the health bureaus. It is most philanthropic for the factory inspectors to determine the presence of any employés under the legal working age, but more benefit would be derived if more attention were given to the sanitary and health conditions affecting the individuals. It should not only be determined that proper toilet facilities were provided for the employés, but that these toilets are properly located and maintained, and are not a menace. Too many factory toilets are built directly over streams and conducted in such a way that flies may readily carry germs to food-supplies. To determine the age of a child in a factory may save a single life, but to determine where that child has been forced to deposit his discharges may save a hundred. It is the saving of the masses that must be perfected.

No untreated offensive factory waste should be permitted to be discharged into watercourses. Such wastes, as dyes, chemicals, acids and bleaching powders, should be subjected to appropriate chemical precipitants or to coagulants that will render the effluent from settling-basins clear, colorless and free from contamination. For many wastes, aluminum sulphate is the safest and most effective coagulant, but for others ferrous sulphate or slaked lime is preferable. Coke filters possess an absorptive power for many coloring matters (Dunbar). In some cases, as with brewery wastes, it may be more satisfactory to include the factory wastes with municipal sewage rather than to attempt to treat them separately. If possible the wastes should be converted into industrial profit, as is being attempted with sulphite pulp waste.

EFFICACY OF FILTRATION

The influence exerted by the establishment of sewerage and of water filtration is clearly shown by the following table of the typhoid mortality:

Rate per 100,000 Population.	Before Sewerage.	After Sewerage.	After Filtration.
Boston	174	60	20
Lawrence	96	18	2.1
London	90	50	14
Berlin	92	50	5
Breslau	92	40	9
Munich	254	27	9
13 Mass. Cities, average	79.4	38.3	

In other words, water filtration caused a reduction in the typhoid mortality rate of 98 per cent. at Lawrence, 90 per cent. at Ashland, Wis., 80 per cent. at Binghamton, N. Y., 76 per cent. at Philadelphia, 75 per cent. at Watertown, 66 per cent. at Boston and 60 per cent. at Albany.

The bacterial efficiency of sand filters shows that practical application does not fall much below experimental results. In the experimental sand filters at Lawrence 99.48 per cent. of the bacteria were removed, and at the Pittsburg experimental plant 99 per cent. In practice the efficiency of the Providence filters is 99.68 per cent.; Philadelphia, 99.59 per cent.; Rensselaer, N. Y., 99.48 per cent.; York, Pa., 99.57 per cent.; Lawrence, 99 per cent.; Loraine, Ohio, 98 per cent.; Elmira, 98.43 per cent., and Norfolk, 95.99 per cent.

Turbidity is another objectionable condition removed by water purification. It is not only an esthetic objection, but in various industrial establishments an actual menace, and frequently necessitates the installation of private filters. These filters are not sufficient to remove all turbidity and coloration. The removal of fine mineral turbidity, such as comes from clay and culm, can not be accomplished by slow sand filtration, but requires a coagulant.

The turbidity from culm comes principally from the washing of the culm banks in the recovery of buckwheat and rice coal.

Rural contamination of streams should receive more consideration than has been accorded to it; and means must be adopted to check the damage resulting from privies which are placed over streams or on the river banks, and from remote factories discharging into the watercourses. Camps, be they for military, for pleasure, for workman or gypsies, should be so located that the privies are situated far from all streams and far from the camps themselves. It is preferable for the toilet to be erected on the summit of a hill, provided there be

no pump or well immediately below. Since it is possible for the direction of flow of ground water to be in the opposite direction to that of surface water, as toward a hill summit, in locating wells and cesspools the position of the near-by large watercourses must be considered. Ground water tends to flow toward the larger streams or rivers, without being necessarily influenced by intervening hills. The epidemic at Ithaca probably resulted from a gang of Italian railroad workmen establishing their camp along the water supply. These camps should have definite latrines erected, the location of which should be occasionally changed.

Some writers persist in saying that there is no objection to a farmer emptying sewage into a stream, and Lake adds the provision, "if the stream is not used for domestic supply." A stream not used for a domestic supply is a rarity; except in few unsettled districts, all streams had better be regarded as domestic supplies. To empty sewage into a watercourse is probably more dangerous than the use of the old-fashioned privy, except where the privy is in immediate proximity to a well.

Stream pollution is far more dangerous than the use of a properly situated, properly constructed and protected privy. Sanitary engineers accept the theorem that it is the time consumed and not the dilution or rapidity and turbulence of a river that is most responsible for the bacterial purification of streams. If typhoid germs are discharged into a stream which flows at a rate of five miles an hour, which is a comparatively quiet stream, accepting Russell's results that the germs will die in five days, those germs could be carried 600 miles, surely far enough to reach some domestic supply. Hence it may be concluded that any pollution, however remote, is apt to affect some consumer, unless it occurs near the sea.

To assist in the purification of watercourses, physicians should be required to disinfect all discharges from typhoid and tuberculous patients. Physicians should be more prompt in reporting infectious cases, being required by law and encouraged by printed postals. They should report cases of insanitation coming under their notice. Local health officers and factory inspectors should inspect temporary camps of workmen and pleasure seekers, and should inspect and report to a central authority all examples of stream pollution from towns, houses and factories which occur within their precincts, as well as any gross polluted appearance of the watercourses. The finding of dead fish in a stream, being indicative of some kind of pollution, should lead to an inspection, and the saving of fish should be an object. Before establishing a filtration system cities should determine the feasibility of obtaining water from an unpolluted locality which can be kept under control. Watersheds should be patroled. A good man on the alert can patrol a large district, getting his information through various ways and personally inspecting all suspicious localities frequently.

By securing legal enactment and arousing public sympathy through the use of statistical and experimental evidence, with the use of uniform standards to represent financial results, the work of the sanitary corps is strengthened. Their work becomes more efficient by obtaining notices of legal or hygienic encroachments through such channels as information can come, and eternal vigilance on the part of the few brings success and life to the many.

5038 Pine Street.

ABSTRACT OF DISCUSSION

ON PAPERS OF DRS. EVANS AND WOOD

DR. W. K. JACQUES, Chicago: I drink Lake Michigan water, and I think that every one who is thus afflicted ought to be thankful to Dr. Evans for this paper and also for the water commission which was started under his influence and instigation. If it keeps on as it has begun, the data which will soon be collected will be of the greatest value to those who are obliged to depend for their drinking water and domestic water supply on Lake Michigan and the tributary lakes. It is strange that the very people most interested are the people who do not care to take part in this sort of thing. As an illustration, I have a summer home across the lake in a small city, and when I first went there the people of that town were depending on the disposal of excreta in privies, as in ordinary country places. Within five years a sewer has been opened and extended down into a little river which passes through the center of the city. The water supply is taken in along this river from Lake Michigan. Since the sewer has been emptied into the river typhoid has been a veritable scourge in that town. Last winter it was decided that something must be wrong with the intake; a diver investigated and found twenty-three places where the intake was defective and the river water was going in through the intake. That is, he reported twenty-three places; and that is all they had money enough to repair.

Now, the City of Chicago sends to this city over a hundred thousand people every summer, a large proportion of whom are young and especially susceptible to typhoid infection. It would pay Chicago to extend that water intake; but we, of course, are unable to do it; and this state has withdrawn from this commission; so that the very state that needs it most will get the least benefit from the commission. The proper disposal of this sewage before it is even emptied into the river and the extension of that intake a mile out into the lake are what should be required.

DR. L. H. MONTGOMERY, Chicago: I was pleased to hear Dr. Evans in his paper state that, in his opinion, the federal government should have control or supervision over the chain of our northern lakes, having reference, of course, to the pollution of the water. I do not know whether he intended to intimate that the general government should have control of the rivers discharging their waters into those lakes. I would favor federal control of streams and rivers as well, as many, if indeed not all of these larger rivers serve as open sewers throughout the United States. We seldom hear of any one being prosecuted for pollution of rivers; factories are located on rivers and lakes; discharges are emptied there by the employees; and while many of the commonwealths have laws prohibiting pollution of springs, lakes, rivers and other sources of fresh water for domiciliary purposes, yet the legislatures do not make the financial appropriations for the observance of such laws and the punishment of violators thereof. This pollution goes on year after year, then somebody awakens, and, as Dr. Jacques says, money is appropriated which goes so far and no farther, partly removing the trouble while the menace to health still goes on in a degree. There is negligence, and it is often, I believe, from lack of appropriations that state authorities do not go ahead and carry out the law. I believe that the national government should have control over all these matters connected with our great rivers and lakes throughout the country.

DR. W. FORREST DUTTON, Walker's Mills, Pa.: I believe that the members of this Section who were in Chicago last year remember the courtesy shown us by the City of Chicago when, through the hospitality of Dr. Evans, we were shown the wonderful mechanism of Chicago's water supply. To my mind, it is one of the most wonderful pieces of sanitary work that I have ever seen; and I believe that the municipality of Chicago does not really appreciate the hard work that Dr. Evans has put into its department of health. I believe that if Dr. Evans is maintained at the head of the department of health in the City of Chicago, in a very few years he will make it one of the cleanest cities in the world; whereas, some few years ago, it was referred to as one of the dirtiest. Coming a little closer

home, to the City of Pittsburg, since the installation of its filtration plant, the rate of typhoid mortality has been reduced from 200 per 100,000 to about 15 per 100,000. It is impossible to filter the steel mill chemicals from the river water. These so irritate the intestinal tract that it readily becomes a point of attack for the typhoid bacillus. If the large municipalities throughout the United States had such officials as Dr. Evans of Chicago, Dr. Hurty of Indianapolis, Dr. Bracken of St. Paul, and the eminent sanitarian, Dr. Egbert of Philadelphia, we should have a much better record to show to our brethren abroad.

DR. SENECA EGBERT, Philadelphia, Pa.: I would like to take issue with Dr. Montgomery as to the government taking charge of all rivers and streams. I believe that the government should take charge of the great chain of lakes, but we are demonstrating in Pennsylvania that we do not need the United States government's help. With a fair appropriation from the state legislature, and men who have nerve enough to do the work, it can be done by the states. I am enough of a states' rights' man to believe in that sort of thing. It was said not long ago that the Pennsylvania State Commissioner of Health had cleaned up over 4,000 sources of pollution along the Schuylkill that supplies most of Philadelphia with water. Those of us who live in Pennsylvania all know that a tremendous amount of work toward the protection of the streams can be done—and has been done—by a man who has the power of the state back of him, a good, thorough appropriation, and then enough nerve to do the work. More than that, I think Philadelphians as well as Pittsburgers have appreciated the benefits of the improvement of the water supply. In my own ward, one of my near neighbors, a practising colleague, a few years ago had 30 cases of typhoid fever in a year; he now has 3. We are practically eliminating typhoid from Philadelphia, which used to be notable for its excess of this disease.

There is another phase of the question: Since we have learned so much in the last two or three years about typhoid bacilli-carriers, it seems to me that the importance of this question of the non-pollution of streams is greater than it ever was before. We know now that people traveling from place to place can still carry the infection of a typhoid attack of months or years before to those places; and if the drainage from any privy or cesspool can get into the water supply, they may become sources of typhoid infection to large numbers of people. Many and many a small town, and almost all the smaller hamlets, have no common water-supply or any sewer system, and the people rely on the old-fashioned well and the old-fashioned privy vaults. In such places the danger of infection must be occasionally present and we cannot give too much attention to this problem.

DR. MARSHALL LANGTON PRICE, Baltimore: There is a single point in Dr. Wood's paper that I want to touch on; that is the estimate of the economic loss caused by the death of a human being. It is admitted, of course, that any computation is unsatisfactory, and often inaccurate; but whether we have an accurate or inaccurate standard, we ought to agree on some standard of computation. I recently recommended for that purpose what I call the life-capital method. That is, computing an indivdual's earnings up to the time he becomes economically disqualified, or up to the time of his death, we can calculate the loss in life capital by using any of the standard life-tables. From these we can calculate the average expectancy of life at the time the individual dies of any disease such as typhoid. If a man earns $2 a day from his eighteenth to his thirtieth year, he will accumulate $10,000 life-capital: that is, he has lived a $10,000 life. Of course, if those earnings are interrupted by death or disease, he has evidently lost part of his life-capital—that which under the life-capital method he would have earned if he had remained alive to his thirtieth year. You have to give definite limits to the working period; but it strikes me that it is about the best standard which we can devise at the present time as a unit, and one least liable to misconstruction. In regard to typhoid being a rural disease, that fact was first pointed out by a civilian, Colonel Waring. The subject was later exhaustively described by Dr. Fulton in a careful comparison of rural and urban typhoid fever; and he found, in his studies, that the rural mortality was very considerably higher, I think almost 50 per cent.

DR. JOHN S. FULTON, Baltimore, Md.: I classified more than 300 cities according to their populations, and found that the five largest cities in the United States had the lowest typhoid mortality, averaging about 25 per 100,000. The average for these five cities, at this time, would be found lower. From this minimum of 25 per 100,000 the mortality was found to increase as the scale of population diminished, until the heaviest typhoid mortality was reached under truly rural conditions, i. e., where only about 10 per cent. of the people live in towns. Rural populations suffered a typhoid mortality of about 65 per 100,000. Pittsburg caused an irregularity in this descending scale of mortality, the monstrous mortality of this city raising the average for all the cities of that class to about 45 per 100,000. While the article to which Dr. Price refers may have been the first in which convincing figures were shown, it was not far ahead of Dr. Egbert's article in which the same conclusion was reached. Long before either of us looked into the statistics, Colonel Waring said, in the introduction to his work on "Sewerage," that typhoid fever is a rural disease, and its progress is in general from the country to the city, rather than from the city to the country. It was a layman, therefore, and not a physician, who first called attention to the error, so prevalent among medical writers, of discussing typhoid fever as one of the chief scourges of cities.

DR. F. W. SELL, Rahway, N. J.: I want to speak a word for New Jersey, and to say that we have now, I think, taken an advanced position, alongside of Pennsylvania, Massachusetts, and New York, in the way that our state board of health is supervising the disposal of the sewage of towns on our watersheds. I think that there are no less than 53 disposal plants now under the supervision of our state board either on the shore or on inland watersheds. Individual cities have tried to oppose the putting in of these plants because of lack of education. They do not seem to realize the necessity of it; but the time will come, I feel sure, when they will all fall in line; and one very great sign of the times, I consider, is shown in the cooperation of the states of New York, Pennsylvania and New Jersey along the Delaware, in a similar manner to that of the cities and states which Dr. Evans has described.

DR. J. H. WHITE, New Orleans: I do not believe that national control should be extended any further than that point at which the people with practical unanimity shall propose the surrender of their authority to the nation and admit that the job is too big for them. The point where national control should come in (and this is what Dr. Evans claims) is on waters that are interstate, on waters which involve, especially, as the lakes do, not only interstate, but international issues, and in similar cases. I am a representative of the national health service, and I want to make it plain that we are not trying to gobble what does not belong to us.

DR. W. A. EVANS, Chicago: The situation in Chicago is this: Twenty-four miles north is Waukegan, a city of 30,000. The intervening distance is solidly filled in with smaller towns. The sewage of these, nearly always raw, is poured into the lake. The drinking-water is taken from the lake at points always less than one mile from shore. No intake is more than two miles from the nearest sewer outfall and some are much nearer. The water is not filtered. Then comes Chicago's twenty-five miles of lake front. In this sweep no sewage enters the lake except through the Calumet River, located two miles from the Indiana line. In it there are six water intakes; one, about two miles from Chicago's north line, is located close in shore, but is supplied with a filter; the others are from two to four miles out; they do not have filters. Joining us on the south are Hammond, East Chicago, Indiana Harbor, Whiting and Gary, having a combined population of about 100,000. These towns put one-half their sewage into the Calumet River and the other half directly into the lake. The Calumet River receives the sewage of about 200,000 people; 50,000 in Indiana and 150,000 in Chicago and Cook county outside of Chicago. None of this sewage flows over ten miles in the river and the bulk of it flows less than three miles in the river. About half the Calumet River is in Indiana

and half in Illinois. Its mouth is in Illinois two miles from Indiana. The Indiana towns, except Gary, have water intakes within a few hundred feet of shore and a few hundred feet of sewer outfalls and are without filters. The sewage is raw. From the Calumet River to the nearest Chicago intake is about four miles. From the Calumet River to the farthest Indiana intake, except Gary, is about five miles.

There are no constant water or wind currents in Lake Michigan. The current is with the wind. A lake flow of five miles is not sufficient to purify a large volume of sewage. When a strong north wind blows every town is polluted by the town north of it. And the Calumet River, carrying Chicago sewage, pollutes the Indiana towns. When the wind is from the southeast the Indiana sewage pollutes the Chicago water and every town up to Waukegan is polluted by the towns south of it.

Whose problem is the Calumet—half in Indiana, half in Illinois—discharging in Illinois two miles from the line, and with a lake flow into Indiana waters whenever the wind is from the west or north? Can any government handle a problem like this except the national government? Are not lines of demarkation between states theories, while a stream of sewage pollution from the Hammond sewer to the Chicago intake is an actual condition? If the national government has not now a way, is it not up to them to find a way?

Then there is the matter of dumping dredgings into Lake Michigan near water intakes. Much of this dumping is done under contract with the War Department. In Chicago waters most of this is clay and it is dumped in water sixteen feet deep. Storms stir Lake Michigan to a depth of fifty feet at times. Consequently our drinking-water is often muddy after a storm. We are insisting that this dumping be done behind breakwaters or else in water over fifty feet deep. The position taken by the chief of engineers is that the government has exclusive control of dumping, the city has no authority, but that the government has no right to be swayed by any consideration of health. To this I would say that if the government officials finally conclude they have now no way, it is up to them speedily to find a way.

I wish to mention another point before concluding. I know of a town near Chicago which has located its intakes with relation to its sewer outfalls on the basis of a continuous lake flow in one direction, and not far away is another town which has its water intakes located on the basis of a flow in the opposite direction. Each is wrong.

DR. HAROLD B. WOOD, Philadelphia: To her honor, include New Jersey with New Hampshire. These are the two states having the lowest typhoid mortality rate. In Pennsylvania, Dr. Dixon, that he may best overcome the rural typhoid mortality, is having sanitary surveys made of all streams. The work at present is being done in the western part of the state, having accomplished a sanitary survey of every tributary of probably three-fourths of the Allegheny river. In regard to the utilization of privies: Sanitarians have been working for some time to abolish privies, warning the people, but advising them of no methods for a proper sewage disposal in the country places or for factories situated along streams. One town in the South, of probably five or six hundred inhabitants, uses, I am told, about forty privies situated along a river bank overhanging the stream. The lack of danger from some privies (that is, excluding the danger from fly contamination) where they cannot pollute water supplies, can be well illustrated by the case of Media, Pa. Recently I talked with a physician who said that in the last ten years there had been not five cases of typhoid fever in Media, a city of about 4,000 inhabitants. Dug privy wells is the only sewage disposal. The water is entirely pumped from a nearby stream, an excellent water, practically under control. One of the contentions to be met in Philadelphia is the impatience of the people. Recently there has been a small typhoid outbreak there in the northern part of the city, that part which has just been supplied with filtered water. Immediately the newspapers and the general public concluded that there was an inefficiency in the slow-sand filters. There is no doubt that the infection came almost entirely through food-supplies, flies and importation. In this outbreak the milk supply could be excluded. Some of the people in Philadelphia doubt the utility of the filters on account of their not excluding all turbidity, never having been instructed by the newspapers, or in any other way, that the finest turbidity cannot be removed by slow-sand filtration. Of course, it must be admitted that it is extremely difficult to detect the typhoid bacillus in water. While most experimenters adopt the Drigalshi-Conradi method, Dr. Bergey employs a test founded on the fermentative ability of the bacteria; and Dr. Rives, Pennsylvania's state bacteriologist, depends on his colorimetric test. A sanitary inspection is of as much value and dependence as a laboratory analysis of a water. In view of doubts expressed, the evidence is conclusive that water is contaminated and often transmits disease.

Clinical Notes

SYMPTOMS FOLLOWING THE CUTANEOUS TUBERCULIN TEST, SUGGESTIVE OF A SPECIFIC GENERAL REACTION

F. BUCKMASTER, M. D.
EFFINGHAM, ILL.

A few months ago when Dr. C. von Pirquet made known to the medical world his tuberculin skin test much was hoped from it in a diagnostic way, and, indeed, much was promised. Simplicity of detail, practical reliability, and freedom from specific general and focal symptoms were claimed for it. There can be no argument as to the first claim made for this test, but much has been said against its reliability as a diagnostic means in tuberculosis. Regardless of what we had expected of it, or of what had been claimed for it in a diagnostic way by Dr. von Pirquet, it has never been determined definitely as yet just what its true diagnostic reliability is, or will prove to be, in the various forms of tuberculosis.

However, opinions on its diagnostic value may have been at variance, it seems to have been generally conceded by those who have used it that it was free from specific general and focal reactions in the presence of tuberculous disease. Regarding these reactions Dr. C. von Pirquet[1] himself has the following to say:

> My cutaneous method has the advantage over the injection of tuberculin, that it does not produce any general symptoms. . . . . It is, however, not as sensitive as the *Stichreaction*, and does not produce inflammatory phenomena of the tuberculous foci, which after Koch's injection can be utilized diagnostically."

These views as expressed by von Pirquet seem to have been looked on by all as being true. I wish at this time, however, to report a case exhibiting symptoms, unmistakably those of a specific general reaction, following this skin test. The history follows:

History.—Miss G. B., aged 27, was seen June 23, 1909. Father died at age of 50, from hepatic abscess, complicated by some form of chronic pleural and pulmonary diseases, likely tuberculosis. Mother died at 61 from heart disease. Two brothers alive; one is said to have Bright's disease. One brother died at 21 from tuberculosis, following an attack of influenza. Four sisters alive and well; three dead, one at 16 from heart disease; one at 17 and one at 19 from tuberculosis. Patient does light housework at home when able. Was well as a child, except for pneumonia at 5, of moderate severity, from which she made a good recovery. At 7 she was in bed six or seven weeks with an attack of typhoid, making a good recovery after about three or four months. Had febrile attacks at 14, and at 24, which was diagnosed as typhoid, but she was never totally confined to bed during their course, but in each instance was "up and down" for two or three weeks. Permanent recoveries seemed to her to be good. Had an acute bronchitis during the

1. THE JOURNAL A. M. A., Feb. 27, 1909, lii, 675.

past spring, having some fever and cough for a week or two, both finally leaving her, but she says she has not been so well since that sickness, and that she has had soreness, and at times a weak feeling in the chest. Has much pain and soreness in the right upper abdomen, at times, and says stomach feels better. after eating; says she has a hungry feeling or pain, which causes her to eat often between meals, and occasionally during the night. No vomiting, except a few years ago when she had severe acute attacks of pain. Menstruation has always been regular, beginning at 12, quite free, of four or five days' duration; has pain and cramps, and is usually in bed a day or more. The last period appeared the middle of June. Has had some leucorrhea this spring.

Present Illness.—Began six years ago with a right abdominal pain, cramp-like, and intermittent, which kept her in bed for about a week. Says the right side of the abdomen was very sore at the time. Says she gradually recovered, but has had light attacks of pain and soreness in the same region every few days, which she thinks would have amounted to one week in each month, but says the trouble was not connected with the regular times for the periods. Four years ago she was in bed for two weeks with another severe acute attack, apparently of the same trouble. She vomited during this and the first acute attack. Recovery from this attack was very imperfect, and she has almost never been free from her abdominal pain and soreness since, but never in bed with it again, though she has worked some at times. Her trouble has gradually grown worse for the past four years, until about three weeks ago, when she says she felt something give way in her, as it were, and this was followed in about two hours by the discharge of about a pint of pus by the rectum. She continued to pass more pus by the rectum at intervals, for the next five days, when it totally ceased. While passing this pus she had freedeom from pain, but when the discharge ceased the pain and soreness again became prominent. No cough and no night sweat. Patient has been "up and down," and has been without fever during the two weeks that Dr. Broadway has treated her.

Examination.—The patient looks weak and tired; weighs 97 pounds; skin is dark, pupillary reaction is slow, tongue is coated, has no goiter. Patient has a well-formed and a well-filled-out chest, and expansion is good. Lungs negative, except perhaps for the slightest harshness in the breath sounds in the outer half of the upper third of the anterior surface of the right lung. Heart negative and pulse 74. Abdomen, to inspection and percussion, appears normal. Liver slightly enlarged. Spleen normal in size and position. The right upper quadrant is very rigid and very tender, with the tenderness seeming to center over the gall-bladder and the duodenum, diffusing out over the pylorus, and downward toward the appendix, though in the immediate appendiceal region there is no rigidity, but there is much tenderness deep in at McBurney's point, showing the unmistakable appendiceal lesion, indicated by her history.

The left side in total, and the right lower quadrant except the appendix shows no tenderness, and no rigidity, except for a left rectus rigidity for about two or three inches, opposite the umbilicus. No tenderness here though. No masses can be made out. No renal tenderness, or displacement, nor can other visceral displacement be made out. Bimanual by rectum shows nothing, but apparently normal conditions. Temperature and pulse during the afternoon remained normal. Bowels have been moving two to three times a day, without diarrheal tendency. The von Pirquet test was made about 1 p. m., the upper and lower points on her arm being inoculated. Patient was left in bed on a very light diet, and with ice-bag on abdomen.

The next morning the patient complained that she was really sick, felt flushed and full headed, nauseated, with scant vomiting, and had an increase in her abdominal soreness and much more pain, and at 9 her temperature was 101.6 and pulse 100. During the day her temperature reached 102, and the pulse a little above 100, and she was "sick," as she expressed it, all day, could eat nothing, and had some headache, though this has been a very infrequent symptom with her. By 8 in the evening her temperature had dropped to 100 and the pulse to 86, and she felt much better in every way, the nausea and the oppressive feeling in her chest clearing up. During this day and the next, considerable harshness in breathing and a little dullness on percussion existed in the part of the right lung where I had the day before heard a little harsh breathing, but no râles were heard.

On the next morning her temperature and pulse were normal, and have remained so for the past three days, and her soreness and pain have entirely cleared up from the rest and ice-bag, and she has had no nausea nor other of the disagreeable symptoms so prominent the next day after the skin test was made. The local reaction on the arm, beginning to show on the same day the fever and other symptoms showed themselves, became very bright.

The total sample of urine for twenty-four hours was 52 ounces, with a specific gravity of 1.008, but was negative to all further tests. No tubercle bacilli in the little bit of sputum once collected, and an analysis of the stomach contents made on two successive mornings showed each time four ounces withdrawn, of a smooth even consistence, showing that it was being well digested; no free hydrochloric acid and no organic acids. One examination showed the combined acids at 65 points Toepfer, while the next showed 60.

Operation (June 29, 1909).—Chronic adhesive appendicitis was found, the appendix reaching up practically to the right kidney. The adhesions were attached high up to the mesentery of the ascending colon and were drawn very tight, evidently causing the pain. Stomach, duodenum, bile system and pancreas were negative. Pain left the patient and all soreness cleared up shortly after operation and she went home the eighteenth day. There were no appearances of tuberculosis in the abdomen. Since the patient went home she has taken fats freely and sleeps out in a tent and is doing well.

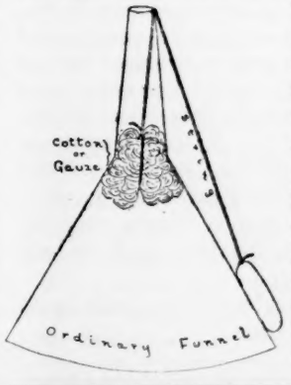
I noticed in THE JOURNAL[1] a report by Dr. Rayevsky of two similar results. One of his specific general reactions was much more marked than occurred in my one case. Otherwise the time of appearance of the symptoms and their nature tallied very closely in all three cases. No hoarseness developed in my case, as the throat and larynx were free from involvement.

As yet symptoms of tuberculous involvement, which already has a little start in the right lung, are lacking. There can be no doubt that this patient showed a specific general and focal reaction, and I am inclined to think that with closer records kept on patients on whom this test is made, from the large dose of the tuberculin made use of in this way, we shall find that a specific general and focal reaction will be found not to be the rare thing it has been supposed to be in the past.

AN IMPROVISED ANESTHESIA CONE

L. T. A. HOTTENDORF, M.D.
RANDOLPH, UTAH

This simple device will appeal to many a country practitioner, especially for obstetric work. A small wad of cotton or gauze is tied up with a piece of string (like a tampon) and the end of the string is passed through the neck of a common funnel and tied in place outside.



The anesthetic is dropped on the cotton as required. The amount of cotton or gauze should vary, depending on whether it is desired to use the anesthetic by the drop method or to saturate the pad. The patient can hold the cone herself, and, therefore, there is no possibility of giving too much anesthetic. I have found this simple arrangement very satisfactory in a great number of cases.

1. June 26, 1909, lii, 2102.

ABNORMALLY LONG VERMIFORM APPENDIX *

H. P. COLE, M.D., AND GILMAN J. WINTHROP, M.D.
MOBILE, ALA.

The average length of the appendix, as stated by different authors, is from 8 to 11.5 cm (3 to 4½ in.), with a mean of 9.2 cm. (Kelly, Ribbert and Berry place it at about 8.3 cm., 3¼ in.), or between 3 and 3½ inches. Abnormally long appendices have been noted by J. D. Blake (24 cm.—9⅓ in.), Lafforge (24 cm.—9⅓ in.), Luschka (23 cm.—9 in.) and Lenzmann (22 cm.—8⅔ in.). Below we report a case in which we removed an appendix 20.9 cm. (8¼ in.) in length, about two and one-half times the normal length.

History.—The patient was a mulatto woman, aged 31 years, having what we diagnosed clinically as a myoma of the uterus and an ovarian cyst (left).

Operation.—On Dec. 3, 1908, under ether anesthesia, a pedunculated myoma 13.5 by 13 by 13 cm. (5 1/5 by 5 by 5 in.) was removed by tying and cutting the pedicle. A large ovarian cyst, together with the Fallopian tube, was removed from the left broad ligament. A small cyst was removed from the right ovary. On looking for the appendix almost complete absence of the mesoappendix was noted. The appendix lay in the second most frequent position ascending vertically behind the cecum and first portion of the colon, and partially attached to the dorsal wall of the large intestine. The tip extended to the level of the upper pole of the kidney. Considerable difficulty being experienced in freeing the appendix, its peritoneal coat was incised at the cecal junction and the appendix then stripped and dissected free from this covering. The stump was ligated and inverted into the cecum by the usual purse-string method. The uterus was then suspended and the abdomen closed without drainage. The patient made an uneventful recovery and left the hospital twelve days after the operation.

This appendix had apparently given no symptoms. It was probably drawn into the ascending position by the formation of early adhesions between the appendix and the other organs lying posterior to the cecum at the time of its descent, as suggested by Kelly. Removal was undertaken because of the more frequent occurrence of inflammation in appendices lying in this position.

204 Conti Street.

TECHNIC IN TRANSFUSION

HERMANN B. GESSNER, M.D.
Professor in the Miles Laboratory of Operative Surgery, Tulane University of Louisiana
NEW ORLEANS

In experimental work in the laboratory, in which I have had the assistance of Dr. W. Lassiter, we have found the use of the fine tenacula of the Elsberg outfit advantageous in doing transfusion experiments on the lower animals with the Crile tube. The tenaculum is thrust through the Crile tube, hooks the artery by the circumference, and draws it through more quickly and with less traumatism than when sutures are used for the purpose or the artery is pushed through. The artery once drawn through, a second tenaculum suffices to cuff the extremity over the Crile tube. Here the cuff may be secured with a ligature over one of the grooves or, if desired, it can be held in place with the two tenacula while with two more the recipient vessel is drawn over the cuffed donor vessel and a single ligature used to hold both over the tube.

The advantages are ease of performance, a minimum of traumatism, and economy of time.

506 Morris Building.

* Read before the Medical Society of Mobile County, Ala., Jan. 29, 1909.

ACUTE MILIARY TUBERCULOSIS FOLLOWING RENAL TUBERCULOSIS, SECONDARY TO OLD HEALED BILATERAL APICAL TUBERCULOSIS

PAUL H. RINGER, A.B., M.D.
ASHEVILLE, N. C.

The following case may be of interest to many as being to a great degree illustrative of the relations of cause and effect in the mobilization of tubercle bacilli after an apparent cure has been effected. In the case reported here no knowledge of the primary disease was obtained until the autopsy, the patient having died from general dissemination. A point of special interest is the intermediate route chosen by the tubercle bacilli, and their temporary halting place in the right kidney before spreading to the body at large.

Patient.—I was called on July 19, 1909, to see Mr. J. C., aged 28, a farmer from Kentucky, who had been in Asheville three weeks. Data were obtained from his wife.

History.—Mother and several brothers died of pulmonary tuberculosis. Patient well as a child; no past illnesses; was an athlete at college. About a year before this illness he had had "attacks" consisting of severe pain in the region of the bladder. These attacks came on after he had worked very hard building a house. The pain caused vomiting. These attacks recurred several times, and finally stopped. About six months before the present illness he had "stomach trouble" (nature very obscure), and his home physiciain said he had too much acid in the gastric juice; this was counteracted by an alkali. Three months before the present illness the patient began to run an irregular temperature and to lose weight and strength. For the past two months the temperature had been constant, ranging from 99 to 102. At no time had there been actual cough; there had been transient expectoration ascribed to "catarrh." The patient was examined in April, 1909, and was told that his lungs were weak but that the physician did not think it was tuberculosis. It was understood from what could be elicited from his wife that a Moro cutaneous tuberculin test was given—result not positive. The patient had been kept in bed for a month at home and then sent to Asheville. While here he was constantly in bed, growing steadily worse. His bowels were somewhat loose; he was said to be voiding a normal amount of urine.

Examination (July 19).—Patient poorly nourished, sallow and pale; dorsal decubitus; expression anxious. Evidently much loss of weight. Pupils equal, reacting both to light and to accommodation, though somewhat sluggishly. Tongue heavily coated. Throat apparently normal.

Chest: Note over all normal save for possible hyperresonance over the upper lobes. Breath-sounds normal over all. A few subcrepitant râles heard on deep breathing and on coughing in first right and left intercostal spaces. Also a few râles on left side in anterior and mid-axillary lines down to about the eighth rib. No adventitious sounds behind.

Abdomen: Tender over all. Liver, spleen and gall bladder not palpable. Some tympanites; no rose-spots. In hypogastric region there was a large tumor half the size of an adult head, sharply defined, smooth, tense, flat on percussion. It was in the region of the bladder and very tender to pressure. Patient voided about 12 ounces of urine on request. This was examined and found to be acid, sp. gr. 1,016, trace of albumin, moderate amount of pus, no other abnormality. Patient semidelirious for past three days—cerebration slow. Tried to get out of bed.

Course of Disease.—Owing to the inaccessibility of the patient's house and to lack of proper facilities for caring for him, he was brought to the Asheville Mission Hospital on the morning of July 20. During the night of the 19th he was given morphin gr. ⅛, which kept him fairly quiet. The next morning, July 20, he drove three miles and was admitted to the hospital at 11:45 a. m. suffering from a hard chill. At 1 p. m., the abdominal tumor persisting, and having seemingly increased in size, he was catheterized and 53 ounces of urine

withdrawn, the tumor promptly disappearing. He was catheterized again at 9:30 p. m. the same evening and the large amount of urine withdrawn (84 ounces). The patient was given sulphonethylmethanum (trional) gr. 10 and passed a restless night semidelirious, trying to get out of bed and fancying that he saw many people around him. He was again catheterized at 2:30 p. m. on July 21 and 70 ounces withdrawn. I then called Dr. Charles L. Minor of Asheville in consultation. The patient was semi-delirious, quite dyspneic, not cyanotic, abdomen slightly distended, signs in chest as stated above. Dr. Minor and myself made a tentative diagnosis of acute general miliary tuberculosis, based on the following points: Probability of tuberculosis from the history; continued temperature for two months; marked cerebral involvement; abdominal symptoms; decided dyspnea with but insignificant chest findings; rapidity of pulse (120). An Arneth blood picture was made, giving the following result:

I.	II.	III.	IV.	V.	Index.	
29.	42.	24.	3.	2.	83.	(High.)

Leucocyte count, 16,000.

Dr. W. L. Dunn of Asheville also saw the patient, agreed with our diagnosis and did a Widal reaction which was wholly negative in a dilution 1:30.

Patient was again catheterized at midnight on July 21 and 38 ounces withdrawn. Bowels being constipated, 2 drams of a saturated solution of magnesium sulphate were ordered every hour until bowels moved. Other treatment was simply supportive, strychnin and digitalis being given. At night the patient was given morphin, gr. ⅛, which kept him fairly quiet. July 22 patient catheterized three times—total of 64 ounces withdrawn. July 23 the patient had ten involuntary bowel and bladder evacuations; the pulse grew weaker, respirations shallower, the abdomen became more and more distended, and the patient died at 9:45 on the night of July 25. At no time was he rational, and during the last three or four days but rarely recognized those round about him. During his stay at the hospital his temperature ranged from 100.2 to 102.4, with the exception of a drop to 98.3 on the morning of July 21.

His pulse ranged between 108 and 140.

The apparently great polyuria was difficult to explain. The following theory has suggested itself to me: For three weeks the patient had been very sick with no skilled attendant about. His wife, though willing, was not qualified to observe keenly. As he passed urine, she believed that all was well, and paid no heed to the quantity. Owing to his sluggish mental condition, he passed but a small portion of the urine that was in the bladder. As a result, the bladder gradually lost its tone and became greatly dilated. Shortly after systematic catheterization was begun, the bladder regained its tone, and far less urine was obtained than at first. I am therefore led to believe that the polyuria was far more apparent than real. Clinical diagnosis: Acute general miliary tuberculosis; dilatation of bladder.

Autopsy (July 25, 1909, 11 p. m., one and one-half hours after death).—Body that of a large emaciated man. Panniculus adiposus very slight. On opening the abdomen (which was done first in this case), the intestines were found to be enormously distended. Save for some congestion in the ileum, they were normal throughout their whole extent. Peritoneum normal. One enlarged mesenteric gland. Pancreas normal.

Left Kidney: Scattered through the cortex and medulla were several (15 to 20) gray masses, slightly elevated above the surface of the kidney substance and of denser consistency. These areas were about three times the size of a pinhead and resembled gray tubercles. In some the center appeared to be undergoing caseous degeneration.

Right Kidney: Half the normal size. Color normal in central portion, yellowish-gray at each end. Capsule stripped off easily, showing at both poles a collection of waxy yellow matter raised above the surface of the kidney. The surrounding kidney tissue was pale. Section of the kidney along its convex border opened into two cavities, one at each end lined with caseous matter one-third of an inch in thickness and containing some detritus. These cavities opened into the pelvis of the kidney. The cavities were irregular in outline. The central portion of the kidney was nearly normal save for a few scattered tuberculous areas. The pelvis was not affected.

Spleen: A few areas, suggestive of miliary tubercles.

Liver: Normal.

Heart: Small, considerable fatty deposit. Heart muscle and valves normal. Pericardium normal.

Lungs: Unduly pale (countryman?), and both showing strong adhesions of moderate extent at the apices, but none elsewhere. Both apices showed somewhat pigmented depressed scars, 2 inches each, surrounded by emphysematous areas. On section apices showed old healed tuberculous scars with considerable fibrous tissue formation. Beginning outside these areas the whole of both lungs from apex to base was studded with millions of gray miliary tubercles. At the left base a few were going on to caseation. The lungs as a whole felt as though full of shot.

Brain: Not examined.

Anatomic Diagnosis: Old healed bilateral apical pulmonary tuberculosis; bipolar caseous tuberculosis of right kidney; beginning tuberculosis of left kidney; possible tuberculosis of spleen.

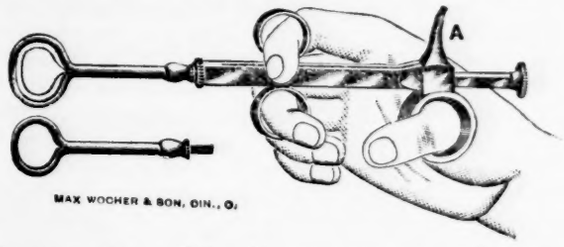
The chronologic order of events seems to have been as follows: An old healed apical tuberculosis; mobilization of the bacilli very probably because of violent physical effort when house-building; lodgment of bacilli in right kidney with establishment of renal tuberculosis and appearance of bladder symptoms referred to in history of case; spread of infection to left kidney; breaking down of areas in right kidney and discharge into a vein giving rise to general dissemination throughout the lungs and without doubt throughout the central nervous system as well.

33 Haywood street.

A NEW TONSIL-SNARE *

H. H. MARTIN, M.D.
SAVANNAH, GA.

I have been using with much satisfaction for the past two years the tonsil-snare shown in the accompanying illustration. I claim nothing original for this instrument, as it is simply a modification of the Krausmueller-Peters snare with the Vedder tip, but the modification is such and the instrument is so solidly constructed



that it can be used in the same manner and with the same degree of lateral pressure as the Mathieu tonsillotome.

The thumb-ring is very broad to prevent injury to the thumb; there is also an extra thumb-hold in case both hands should be required for the écrasement. The instrument is used in exactly the same manner as the Mathieu tonsillotome, except that the tonsil, after being thoroughly freed from all adhesions, must first be seized with a long tenaculum hook which is entrusted to the assistant who makes gentle traction while the operator handles the snare and the tongue-depressor; in case both hands are required in the écrasement the tongue-depressor can be laid aside as soon as the base of the tonsil is well engaged by the wire loop.

The construction of this instrument is so simple that it can be easily taken apart for cleaning.

247 Bull Street.

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* Read in the Section on Laryngology and Otology of the American Medical Association, at the Sixtieth Annual Session, held at Atlantic City, June, 1909.

DETAILS IN TWO COMMONLY USED URINARY TESTS

F. H. CHURCH, A.M., M.D.
UTICA, N. Y.

Those using the Jaffé test for the identification of indican or the indoxyl sulphates in the urine frequently meet an equivocal result. Instead of the expected indigo-blue-colored chloroform solution, the solvent takes on a reddish or reddish-violet tint. This may be due either to indigo-red or, more commonly, to the presence of iodids in the urine. In the latter case, if the iodid is present in large amounts, it may be identified by adding starch water and acidifying directly. If the iodid is present only in small amounts, the chloroform should be removed with the pipette and placed in another test-tube. A little starch water is added and the material made alkaline by the addition of a little sodium or potassium hydroxid. The iodid of the alkali is formed and goes into solution in the starch water. Now on the addition of a little acid the iodin is set free with the characteristic starch-iodin reaction.

According to the customary directions in the text-books for the performance of the Gerhardt test for aceto-acetic acid, on the addition of the ferric chlorid solution to the urine a marked and obscuring precipitate of phosphates is usually obtained. This may be avoided and much time and temper saved by the chemist's simple expedient of adding the urine drop by drop to 10 or 15 c.c. of the ferric chlorid solution. In this way it is also possible to get a rough idea of the amount of the aceto-acetic acid present. If this is present in quantities it will give a strong Bordeaux red coloration with the addition of a very few drops of the urine; otherwise this coloration will not be present until 1 or 2 c.c. of the urine have been added.

Furthermore, it is possible to vary the strength of the reaction by varying the acidity of the ferric chlorid. After the reaction is performed and in the presence of a weak or indeterminate result, the addition of a very little dilute acid or alkali will have a tendency to accentuate the color. The material may then be halved and one tube boiled. The diacetic acid is, of course, broken up and the red reaction clears up just as it would on standing for twenty-four or forty-eight hours. These facts hold for the behavior of the diacetate of ethyl in aqueous solution as well as the acid or more probably its esters in the urine.

43 Gardner Building.

Professional Secrecy and Accident Insurance.—An article in the *Presse Médicale*, April 17, by a professor in the law department of the university at Montpellier and a member of the medical faculty, discusses this subject and suggests that in making out a certificate in regard to an accident, it should be handed when completed to the patient himself or his representatives. By not giving the certificate to any one but the victim of the accident, the physician is relieved from the risk of breach of the professional obligation to secrecy. The certificate should be read to the victim or his representatives and the technical terms explained to them so that they can not plead ignorance of their meaning later. Unless objective signs of a pathologic taint, not affecting the trauma, are discovered, it is unnecessary to certify to it, and the patient's statements in regard to a pathologic past for which no objective findings can be detected should be regarded as confidential. The discussion was suggested by a recent case in which a workman sued the physician for $400 damages because in his certificate he mentioned the presence of gonococcal urethritis. The case was non-suited finally.

TORSION OF PEDICLE OF AN OVARIAN CYSTOMA IN A YOUNG GIRL

M. BORNSTEIN, M.D.
MILWAUKEE, WIS.

A number of cases of ovarian cysts with twisted pedicles in girls below the age of fourteen are to be found in medical literature. Nevertheless, there is a common liability of overlooking this condition and in differentiating it from the more common inflammatory conditions in the lower abdomen. The following case should be of interest:

History.—B. S., female, aged 13; had never menstruated, but for three months past had complained of periodic attacks of pain, usually at the end of each month, starting in the right knee, appearing in the thigh and groin of the same side. Right hip-joint was normal. A physician diagnosed the first attack one of appendicitis but operation was refused. On the evening of March 31 she had a similar attack with a sharp pain in the right iliac region; developed fever and vomited. She was examined next morning, but her physician could find no local tenderness on palpation. The abdomen was distended and vomiting continued; the pulse became rapid and feeble.

Operation.—She was admitted to Mount Sinai Hospital on the evening of March 31 and operated on in the clinic of Dr. H. Greenberg. Abdomen was opened over the right iliac fossa. A local peritonitis was present. The appendix appeared normal but contained several dried-up concretions. Palpation disclosed a large cystic mass springing from the right side of the pelvis. It was found to be a large ovarian cyst, about the size of a man's head, with its pedicle completely twisted. The cyst was emptied and removed. Its contents were fluid and straw colored; the wall bluish and contained several yellowish, thickened masses. The appendix was removed and the abdomen closed.

During the same month Dr. Greenberg operated on a young woman (24 years old) for the same trouble. She was brought in with a diagnosis of acute appendicitis. Incision disclosed a blackened ovarian cyst with a completely twisted pedicle. Both patients have been discharged, cured.

733 Central Avenue.

Therapeutics

THE PREVENTION OF CONTAGION

Perhaps the most valuable service a physician renders is the prevention of the spread of contagious disease in the family of his patient, and the prevention of the spread of disease in the community. While Boards of Health assume the responsibility of preventing the spread of the contagion, it is only in exceptional instances that they can assume the whole responsibility, and if the physician who has charge of the patient is not efficient in his sanitary measures, the advice, orders and restrictions of the Board of Health become almost valueless. Therefore, it is not only the highest aim, but it is the duty of the attending physician to isolate the patient and to prevent the spread of the contagium that others shall not acquire the disease.

To prevent contagion properly, the most important prerequisite is that the physician shall understand the means by which the contagium of each particular disease is spread. Dr. A. H. Doty, Health Officer of the Port of New York, in the *American Journal of the Medical Sciences*, July, 1909, discusses this subject, and his long years of experience plus his efficiency as health officer makes his advice and his scientific conclusions most valuable.

Yellow fever is transmitted by the mosquito only, and clothing, bedding, and even the excretions of the

patient do not carry the infection. Doty believes that the mosquito is the necessary medium for malarial infection, and does not believe that the emanations from swamps and stagnant water can produce it. Consequently these two diseases, and the former especially, may be prevented by any means that prevents mosquito bites, and an infected patient may be prevented from infecting mosquitoes by surrounding him with mosquito netting, or by keeping him in rooms which are mosquito proof, and such management will prevent the infection of others.

It has been proved that plague is not transmitted by fomites, but by the rat through the intermediary carrier of fleas.

Doty believes that there is no proof that clothing, rags, etc., constitute an active agency in the transmission of smallpox, typhus, measles and scarlet fever, and believes that in instances of the outbreak of these diseases that seem to show such means of the transmission of the contagium may always be, by careful investigation, traced to positive active sources of contagium. The clothing transmission theory of children's diseases especially is gradually being disproved by school inspection by medical men. This school inspection has shown that children who are apparently well are really carriers of the various children's diseases. This is especially true of diphtheria, and even of scarlet fever and measles. Children are often ill several days before they show sufficient symptoms to be either sent home from school or to be retained at home by their parents, and during this period of the early stage of the disease they are direct transmitters of the infection. It is also now a well-known fact that patients who have recovered from diphtheria may carry germs in their throats for weeks and even months, and are direct distributors of infection. Typhoid carriers are now known to exist perhaps in every community, and the contamination by their excretions of water and milk supplies has been proved beyond question.

Doty says that, however dirty, soiled or nasty rags, that come from all parts of the world, may be, he has yet to find conclusive or satisfactory evidence that either domestic or foreign rags act as a medium of infection.

He does not believe that paper money or coins, however filthy and old, are transmitters of infection. Otherwise bank clerks and treasury department clerks would be constantly subject to infection. As a matter of fact, they are subject no more to contagious diseases than are men and women in other employments. Careful investigations by W. W. Hilditch, of the Sheffield Laboratory of Bacteriology and Hygiene at Yale University, has caused him to come to the conclusion "that money constitutes an unimportant factor in the transmission of disease."

A senior student in the Yale Medical School two or three years ago also investigated bacteriologically a series of soiled public library books, and his investigations showed that the transmission of disease by this means must also be very rare.

Contagium must then emanate ordinarily from the patient himself and from his various secretions or excretions. Which one of these carries the greatest amount of the particular contagium depends on the particular disease. Certain it is that not sufficient hygienic or sanitary care is taken by the physician, nurse and family of the patient's secretions and excretions. Ordinary disinfection of stools and sputum with chlorid of lime, carbolic acid, corrosive sublimate and even formalin solutions have been proved not to kill specific bacteria in the central parts of the excreted masses. In other words, allowing sputum and feces to stand, even for several hours, in even strong antiseptic solutions, is an ineffectual method of killing the germs of infectious or transmissible diseases. To be effectual, discharges of all kinds must be thoroughly broken up into minute particles before antiseptic solutions can be guaranteed to kill all germs. The disinfection of privy vaults by the usual methods is simply futile, and deep privy vaults in villages and country towns where there are no sewerage facilities are dangerous to the community in proportion to the depth of the vault. The nearer to the surface of the ground and the more the air and sunlight reaches the deposits, the less the likelihood of drinking water contamination and of persistence of life in pathogenic germs.

All discharges from the mouth, throat and lungs should be received into paper sputum cups. Once or twice a day, oftener if necessary, the cup and the contents should be burned, the container washed in an antiseptic solution, and a new cup given the patient. Discharges from the nostrils should be into gauze napkins, and these should be placed in a paper bag at the head of the bed, and the bag and contents burned. Cleansing pieces of cloth or gauze for the mouth and nose should receive the same treatment, viz., be placed in paper bags and burned.

The urine should be passed into vessels that contain 1 to 500 bichlorid solution, or other strong antiseptic. The urine should then stand in this vessel, which should be covered, for an hour. It is then absolutely disinfected, and may be poured into the closet.

The bowel discharges should be into vessels that contain strong bichlorid of mercury solutions, or chlorid of lime solutions. The fecal clumps should then be thoroughly broken up with a stick, and boiling water, in large amount, poured into the mixture of feces and antiseptic. Enough of the boiling water should be used to raise the mixture almost to the boiling point. After an hour the contents of the receptacle may be considered aseptic and may be poured into the closet. This treatment of the feces should be followed out in typhoid fever, bowel infection, acute diarrhea, cholera, dysentery, acute tuberculosis, intestinal tuberculosis, and in intestinal cancer.

All cloths used in cleansing the body of the patient should be put into paper bags and burned. The clothing of the patient, the bed clothing and the clothing of the nurse should be boiled, if clothing is washable, and what is not washable should be baked.

The nurse should cleanse her hands with weak corrosive sublimate solutions every time that she has in any way come in contact with possible sources of contagion from the patient.

Ideally a sick-room should be flyless; in other words, a fly is an abomination, and the sick-room should be so screened that it will be impossible for flies to penetrate it, whatever the disease from which the patient is suffering. If a patient is out of doors for pneumonia, tuberculosis, or other fresh air treatment, the sputum receptacles should be so arranged or covered that it is impossible for flies to come into contact with the sputum.

The methods here advised being carefully carried out, there will be little necessity for the fumigation of rooms and houses with either sulphur or formaldehyd, which fumigations really carry with them a false sense of security and predispose to carelessness by the nurse and family in the cleanliness and hygiene of the patient and his surroundings.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

535 DEARBORN AVENUE . . . CHICAGO, ILL.

Cable Address . . . . "Medic, Chicago"

Subscription price . . . . . Five dollars per annum in advance

[*For other information see second page following reading matter*]

SATURDAY, OCTOBER 2, 1909

FREQUENCY OF HEALED TUBERCULOSIS OF THE MESENTERIC GLANDS

Warthin[1] has carefully examined a large number of lymph nodes, primarily in order to determine the anatomic type of the given gland, and one noteworthy demonstration is the constant occurrence in the mesenteric and retroperitoneal lymph nodes of adults of small hyalin masses. These hyalin masses stain red with acid dyes (eosin and fuchsin) and occur in any part of the node, more frequently, however, in the cortex; they are usually round with sharp borders, varying in size from minute microscopic points to small masses visible to the naked eye. In the larger masses a few nuclei are present; the smaller may be wholly devoid of nuclei, suggesting their being older, while the larger show various stages of a hyalin change in the connective tissue replacing some lesion. These hyalin masses are hyalin scars. In the center of larger masses small deposits of lime salts often occur and reactions for iron may also be obtained. The hyalin masses are easily distinguished from the diffuse hyalin change of the stroma of atrophic nodes and also from hyalin blood vessels.

The interpretation of these masses is an interesting question. Warthin believes that they can not be explained as the result of retrogressive changes associated with senile atrophy and fatty infiltration, because they occur at all periods of life, even in the young, and unassociated with other retrograde changes. Indeed, nodes with hyalin masses may be markedly hyperplastic. Warthin's interpretation is that the hyalin masses in the majority, if not in all of the cases, are tuberculous in nature. He bases this conclusion in part on the fact that in advanced pulmonary tuberculosis the abdominal lymph nodes constantly show nodules in all steps of transformation from the young and miliary epithelioid tubercles to small deeply staining hyalin masses, showing conclusively, it would seem, that hyalin transformations like those described can result from the healing of small tubercles. In other cases of small masses in the mesenteric nodes undergoing hyalin change, a minute caseous center or a single giant cell would serve to indicate the tuberculous nature of the process, even though the hyalin transformation was far advanced. In two cases active miliary tubercles associated with miliary hyalin masses in various stages of formation from tubercles were found, while tuberculosis was not discovered in any other part of the body, indicating that primary mesenteric tubercles may heal with formation of hyalin masses. In most of the cases in which hyalin masses were found, no active tubercles were discovered in the body. But even here the form and character of the hyalin mass indicated healed tubercle. According to Warthin, these hyalin masses are most common in the mesenteric, cervical and bronchial nodes, but are rare in the axillary nodes except in cases of tuberculosis of the breast. This distribution is also suggestive of their tuberculous nature. They are rare in the tonsils.

Assuming that the hyalin masses represent healed tubercles, and in view of the fact that they occur so constantly in the abdominal nodes, the conclusion seems forced on us that the tubercle bacilli enter the body through the intestine much more commonly than has been assumed. In cases of pulmonary tuberculosis the bacilli may gain entrance to the mesenteric nodes from the swallowed sputum carried down into the intestine, but in the absence of pulmonary or other foci of tuberculosis the bacilli must have been introduced either in dust swallowed with saliva or in food.

If the hyalin masses actually represent healed tuberculous lesions, at least in the majority of cases, then, it would seem certain that all adults receive tubercle bacilli through the intestine; and, if this be accepted, then it would be reasonable to attribute pulmonary tuberculosis, at least in many cases, to enterogenous origin, because if bacilli so commonly enter the mesenteric and retroperitoneal lymph nodes they may readily pass on through the thoracic duct to the lungs and bronchial nodes.

1. Sixth International Congress of Tuberculosis.

TRANSMISSION OF SLEEPING-SICKNESS

Probably the two most important problems now confronting those who are investigating sleeping-sickness are: (1) the method by which tsetse flies transmit sleeping sickness and other trypanosomatic infections; (2) does the trypanosome undergo a complicated (probably sexual) development in the fly?

For some time the belief has been prevalent that transmission is of the simple mechanical type, i. e., that the fly draws infected blood into its proboscis and stomach and later, when feeding on a second animal, injects some of the contaminated blood, thus transferring the disease. This conclusion has been based chiefly on the fact that the flies seemed to lose the power of transmission soon after feeding on an infected animal.

A number of experiments, however, seemed to cast doubt on the mechanical method as being the sole process, and the question has arisen as to whether there may be two methods—the first the mechanical, operating soon after the feed on an infected animal, and the second a "biologic" method, coming into action later and depending possibly on a sexual evolution of the parasite in the fly, as happens in relation to the mosquito and malaria. Trypanosomes disappear from the alimentary

tract of the fly so soon after its feed on infected blood that Bruce considered it virtually impossible that mechanical transmission alone could explain the situation.

Recent experiments of Kleine, which have been confirmed by Bruce, contradict some of the previous results.[1] In Kleine's experiments, the flies, *Glossinæ palpales*, were caught fresh from Nature, fed once on monkeys *(Cercopithecus rufoviridis)* which were infected with sleeping sickness (*Trypanosoma gambiense*) and then tested on fresh monkeys every second day. Large numbers of flies were used; thus 336 fed on the first monkey and 225 on the last. All the monkeys became infected, the last one twenty-two days after the beginning of the experiment. In another experiment by Taute, which is reported by Kleine, infection was produced on each of the first three days after feeding. From the fourth to the tenth day no infection resulted. The flies then became infective again, and produced disease from the eleventh to the forty-fourth day.

From these experiments it is concluded that transmission is not purely mechanical, but that flies are true hosts for the trypanosomes. From other experiments with flies, hatched in the laboratory, Kleine concludes that the period of development, or incubation period, in the fly is about twenty days, or a little less. These are important experiments and seem destined to be of great significance for the campaign against sleeping sickness.

Much of the experimental work with tsetse flies and trypanosomes has suffered from lack of sufficient control. Too often in dealing with flies caught from Nature, the possibility of some of them being naturally infected (an event known to occur) has been neglected. Also, as Novy has emphasized, and as Minchin has virtually proved, tsetse flies may harbor, naturally, nonpathogenic as well as pathogenic trypanosomes, a fact which impairs the value of a great deal of the microscopic work which has been done. As a means of avoiding the accident of dealing with naturally infected flies, the custom of using flies which have been bred and raised in the laboratory is being resorted to. Here, again, the possibility of the hereditary transmission of trypanosomes may be a confusing one, and one which is so fundamental that it demands early determination. This is appreciated by many workers in the field.

For unimpeachable work along these lines it would seem to be an unqualified necessity to deal with pure cultures of the parasites, as Novy has suggested, with flies which are known to be absolutely free from trypanosomes, and with experiment animals which have never been exposed to trypanosomatic infection. The pertinence of these points is doubtless realized by those who are engaged in the practical study of the problems. The difficulties are great, but, in spite of this, the progress which has been made is of no small magnitude.

1. These experiments are described in the *Bulletin of the Sleeping-Sickness Bureau*, No. 7, 1909. Prof. Kleine's article "*Weitere wissenschaftliche Beobachtungen über die Entwicklung von Trypanosomen in Glossinen*," appeared in the Deutsch. med. Wchnschr., May 27, 1909, pp. 924-925. Bruce's announcement appeared in a letter to the Royal Society.

A STANDARD CURRICULUM FOR MEDICAL COLLEGES

It is extremely doubtful whether the medical profession as a body really appreciates the far-reaching influence of the splendid work that is being done by the Council on Medical Education of the American Medical Association. The collection of data regarding medical colleges, students and graduates, begun by THE JOURNAL nine years ago, and of data giving the results of state licensing boards' examinations, begun by THE JOURNAL six years ago, revealed the great need of such a permanent committee as the Council on Medical Education and, in fact, furnished a foundation for the council's work. By the actual inspection of medical colleges, by annual conferences with members of state licensing boards and in other ways, the council has extensively developed these statistics, obtained an enormous amount of other valuable educational data and has used them in a most practical and effective manner. Reports of much of the work of the council are published regularly in THE JOURNAL, but from lack of space much more, although none the less valuable, can receive only brief mention.

Probably no work which the council has done is more important than the preparation of a standard curriculum for medical colleges, the report of which is referred to on page 1115. In the preparation of this standard, everything possible was done to insure that it would represent the harmonized ideas, if not the ideals, of as large a number as possible of the leading medical educators, who were selected from all sections of the country. The subjects of the medical curriculum were arranged in ten groups, to be taken up by subcommittees for which ten chairmen were carefully selected. These chairmen were asked to name fifteen leading educators in their particular departments, and from these lists nine other members for each subcommittee were secured. A suggestive outline of the points to be considered was prepared; but each subcommittee was left free to take up the study of the problem relating to its particular subject in its own way, and, after careful study and deliberation, to submit a report to the council, making specific recommendations regarding that particular subject. The work was entered into with an energy and enthusiasm that were astonishing, numerous meetings of committees were held and a large amount of systematic correspondence was carried on, not only with those comprising the regular subcommittees, but also with numerous collaborators and corresponding members. More than an entire year of close application was spent before the reports were finally completed. In order that the work of the subcommittees might not be too much at variance, a preliminary meeting of the ten chairmen was held and, just before the final reports were prepared, these chairmen met again and determined on the curriculum which was to be recommended. The standard presented, therefore, represents the work not only of the one hundred educators who made up the ten sub-

committees, but also of many others who acted as collaborators and corresponding members. It needs but a glance at the list published in the Department of Medical Education to show the high standing and reputation of those who cooperated in the preparation of the curriculum and the breadth of the field covered.

Since there has begun an extensive reconstruction of medical teaching in this country, as illustrated by the numerous mergers of colleges, and the rapid movement toward higher standards of preliminary education, the presentation of this standard curriculum is all the more important and timely. It will bring about not only a greater uniformity of curricula in our medical colleges, but will result in each branch being allowed an amount of time proportional to its value and importance. It will also tend to prevent the overcrowding of the curricula with non-essential subjects and details. Although absolute uniformity of curricula for all colleges is not to be recommended, comparative uniformity is highly desirable in the interests both of medical education and of interstate reciprocity in the licensing of physicians.

The standard recommended reflects great credit on the Council on Medical Education as well as on the members of the various committees who have contributed so much valuable time and careful thought to its preparation. The report is well worth a careful study by those interested in modern scientific medical education.

PELLAGRA

Although it is hardly more than two years since the presence of pellagra in the southern states was recognized, it has been found that the disease is a widespread one and new cases and localities of its occurrence are being constantly reported. It is, moreover, not confined to any one section of the country and is being discovered in such widely separated localities as Massachusetts and Arkansas and possibly even further west. It has appeared in at least three state hospitals for the insane in Illinois, and in one or two of them in such numbers as to assume the proportions of a small epidemic. It has not been reported as yet from any large number of northern localities and its distribution seems somewhat local. Probably, as in the case of some other new disorders to which attention has been suddenly called, the apparent sudden prevalence is due, partly at least, to faults of previous observation. Thus Dr. Lavinder, whose report has been noticed in THE JOURNAL,[1] mentions the fact that the medical staff could recall that cases had been in the institution years before the present outbreak in the Illinois State Hospital at Bartonville, and very probably this is the case elsewhere to some extent. The late accounts, however, would indicate a much greater prevalence than ever before, and it is hardly probable that such local outbreaks of the disease could have occurred in any locality without being observed and properly diagnosed. Asylum physicians have been acquainted with the disease, at least in their reading, and some have been on the lookout for it without being able to identify it in the patients under their care. At most, the cases that have occurred must have been scattered and only sporadic ones.

It may, therefore, be considered a new disease in the United States, and its occasional occurrence heretofore may perhaps be explainable by such idiosyncrasies as are reported in Dr. Hewitt's patient and his relatives in his communication published in this number on "Pellagra in Virginia." While predisposition has been recognized in the etiology, an idiosyncrasy to corn products, such as that reported by Dr. Hewitt, is novel and suggestive. Besides possibly accounting for sporadic cases it would indicate the possibility of some toxic element in the grain that may not be ordinarily effective in producing the disease unless its virulence is greatly enhanced from some cause or other, or the individual is specially susceptible. Case histories should be carefully studied as to this point, and the physician who runs across a case in his practice should give careful attention to the family history as well as the personal antecedents of the patient. The local distribution should be thoroughly traced and its occurrence in the immigrant population of the asylums should also be carefully studied. There is no evidence, according to Dr. Lavinder, that the disorder had any connection with the feeding of the patients in the Bartonville hospital. It must have originated elsewhere and before their admission. He says that he is unable to assign any satisfactory local cause for the extent of the disease in the Bartonville epidemic, and that the housing, feeding and care of the patients in the institution are above criticism. The facts that practically all of the cases of pellagra in this country have been found in institutions for the insane, and that they present the severe type of the disease usually seen in a late stage, suggest that these cases are old ones which have gravitated to the asylums because of the dementia characteristic of the disease. In at least one case of pellagra in an advanced stage, this had presumably occurred, for the patient had within six months arrived in this country from a pellagrous district of Europe.

We have, therefore, a new public health problem which, though extensively studied in Europe for many years, cannot be regarded as definitely solved. The observation of the disease in its beginnings will have to be made largely by the general practitioner, and it seems probable that there will be considerable opportunity for the profession to study the disease in this country. While pellagra is insidious in its course, the symptom-complex is fairly characteristic even in its early stage. This complex consists of gastrointestinal disturbances with "bald" red tongue, erythema of the exposed extremities and center of cheeks, spinal irritation, with probable pain in back and disturbance of the knee-jerks, and mental depression of varying degree. The

1. The notice of Dr. Lavinder's report which should have appeared in the department of General News was through an oversight published as editorial matter in THE JOURNAL, Sept. 25, 1909.

skin symptoms, in themselves unimportant, give a very significant clue to the diagnosis, for, in the first place, there is no other disease with cutaneous lesions presenting a closely similar group of constitutional symptoms, and in the second place the cutaneous lesions themselves, after they have become well developed, are unlike those of any other cutaneous disease. The diagnosis must be made early in the disease if the patients are to be saved. Practitioners should be alive, therefore, to the possibility of its occurrence. In doubtful early cases it would seem to be the part of wisdom to make a provisional diagnosis of pellagra, for nothing will be lost by removing corn products from the diet and giving the patient the hygienic treatment indicated.

Medical News

ARKANSAS

National Guard Notes.—Major L. R. Ellis, Hot Springs M. C., A. N. G., announces that arrangements are being made to increase the membership of the hospital corps of the guard to 36, the number allowed under the new law.

Personal.—Dr. Avery Moore, formerly state auditor, has resigned as a member of the state tax commission.——Dr. J. E. Quidor, Little Rock, has been appointed a member of the Pulaski County Board of Health, vice W. H. Abington, resigned.

Society Organized.—Dallas County Medical Society was organized at Fordyce, September 9, and the following officers were elected: Dr. Claiborne J. March, Fordyce, president; Dr. O. R. Kelley, vice-president; Dr. Thomas L. Rives, Fordyce, secretary; and Dr. William L. Worthington, Fordyce, treasurer.

Medical Schools Open.—The Medical Department of the University of Arkansas, Little Rock, opened September 30.—— The College of Physicians and Surgeons, Little Rock, opened October 1. Drs. Luther D. Reagan, Little Rock, and George H. Martindale, Hope, have been added to the faculty of the college.

Dropped from Register.—Dr. George A. Hinton, Hot Springs, is said to have been dropped from the list of registered physicians at that place, August 6, by the superintendent of the government reservation, acting under instructions from the Department of the Interior. He will be denied the privilege of prescribing the waters until his name is restored to the list.

New Medical Practice Act in Effect.—The new law regulating the practice of medicine went into effect August 6. Under the provisions of this law the number of state medical board meetings is cut down to two a year; and the revocation of licenses for criminal and persistent inebriety, the practice of criminal abortion, either principal or abettor; for the conviction of crime involving moral turpitude; for the public advertising of special ability to treat or cure chronic or incurable diseases; for representation to a board of any license, certificate or diploma, illegally or fraudulently obtained, or the practice of fraud or deception in passing an examination, is authorized. The board is also authorized to make agreements of reciprocity with the examining boards of other states.

CALIFORNIA

Nurse Dead in Hospital Fire.—St. Caroline's Hospital, Redding, a two-story frame building, was destroyed by fire September 19, with a loss of $18,000. The seven patients were removed in safety, but one nurse was burned to death.

Hospital News.—The new Methodist Hospital, Los Angeles, with accommodation for twenty patients, was opened September 8.——The contract has been let for the construction of a new Childrens' Hospital, San Francisco, to cost about $200,000.

Tuberculosis Stamp.—The California Association for the Study and Prevention of Tuberculosis has issued a special stamp, designed to serve the same purpose as the Red Cross stamp that was sold throughout the country by millions last year.

Sub-Society to Be Formed.—On September 17, Kenneth A. Millican, president of the Alameda County Antituberculosis Society, and Dr. William Von Adelung, first vice-president of the society, went to Alameda and formed a sub-society in that city which will be under the direction of Dr. Weston O. Smith.

News of the Day in Hospitals.—The California Hospital, Los Angeles, has introduced permanently the dissemination of the news from the daily press to the patients of the institution. The contents of the newspapers of the day are communicated to the nurses at luncheon and imparted by them to the patients later in the day.

Guests of Faculty.—The annual banquet of the students of the graduating class of the Oakland College of Medicine and Surgery, by the faculty of the college, was held September 14. Dr. Hayward G. Thomas, president of the college, acted as toastmaster, and Dr. Creighton Wellman, professor of tropical medicine, gave an address on "Tropical Diseases."

Personal.—Sir Augustus Waller, director of the physiologic laboratory of the University of London, delivered a series of five lectures at the University of California, Berkeley, beginning September 20, on "Physiology, the Servant of Medicine."——Dr. Newell H. Bullock has been appointed medical inspector of schools of San Jose.——Dr. Claiborne W. Evans, Modesto, has returned from Europe.

CONNECTICUT

Unlicensed Practitioner Fined.—George A. Wilbur, alias Albert Cole, arrested in New Haven on the charge of practicing medicine without a license, is said to have been found guilty and fined $100 and costs.

Personal.—Dr. William S. Hulbert, Winsted, medical examiner, had his left eye enucleated August 19.——Dr. William F. Wood, Danbury, is said to have been adjudged insane and committed to the State Hospital, Middletown.

Tuberculosis Commission Organized.—The State Tuberculosis Commission, at its meeting for organization August 26, elected Dr. John P. C. Foster, New Haven, chairman, and George I. Allen, Middletown, secretary. The commission applied for rooms for a permanent office in the capitol.

State Board of Health Organized.—At the annual meeting of the State Board of Health, the following officers and committees were appointed: President, Dr. Edward K. Root, Hartford; secretary-treasurer, Dr. Joseph H. Townsend, New Haven; director of laboratory and bacteriologist, Dr. Herbert W. Conn; member of board of examiners and embalmers and registrar of physicians for State Board of Health, Dr. Joseph H. Townsend.

Tuberculosis Legislation.—The state legislature has enacted three important antituberculosis laws—the first prohibiting spitting in public places; the second, requiring physicians to report to the local health officer all cases of tuberculosis coming under their care, and giving such instructions as will provide for the safety of persons occupying the same house or apartment, and the third appointing a board of directors to establish county homes for the care and treatment of those suffering from tuberculosis. It is proposed to establish three of these homes. An appropriation of $175,000 has been made for that purpose, with $75,000 additional for maintenance. This appropriation with $50,000 given to aid the Gaylord Farm Sanatorium, Wallingford, Wildwood Sanatorium, Hartford, and Undercliff Sanatorium, Meriden, make a total of $300,000 appropriated by the state for tuberculosis work during the next two years.

DISTRICT OF COLUMBIA

Conflicting Opinions.—The name of John R. Early, the supposed leper, who has been receiving a pension of $72 a month because of total disability, is said to have been stricken from the roll of the pension bureau, as he has been found entirely free from the disease. Dr. G. Armauer Hansen announced September 24 that he had found the bacillus of leprosy in a specimen of Early's skin sent to him for examination.

Personal.—Dr. A. H. Sutherland has been appointed assistant in psychology at the Government Hospital for the Insane, Washington.——Major Frederick S. Russell, U. S. A., professor of pathology in the Army Medical School, and curator of the Army Medical Museum, has been selected to succeed Dr. Joseph J. Kinyoun as professor of pathology and bacteriology in George Washington University.——Dr. William P. Wood of the Episcopal Eye, Ear and Throat Hospital, by presence of mind prevented a fire panic in the institution September 8, but sustained severe burns of the hand in extinguishing the fire.

ILLINOIS

Personal.—Dr. Albert J. Roberts, Ottawa, has been re-elected physician of LaSalle county.——Dr. Emery W. Goem-

bel, Rockford, has been appointed physician of Winnebago county.——Dr. Walter S. Eshbaugh, Marengo, has been appointed deputy coroner of McHenry county.

Chicago

Personal.—Drs. G. F. Fiske, L. L. McArthur, A. D. Bevan, John B. Murphy and G. Paull Marquis have returned from Europe.——Dr. William W. Meloy was operated on for appendicitis at the Passavant Hospital, September 19.

Municipal Laboratory Moves.—The municipal laboratory has been moved from the corner of Franklin and Madison to 218 Washington street, where it has leased 2,000 more square feet of space at an annual reduction of $2,000 in rent.

Buys Postgraduate School.—Financial control of the Post-Graduate Medical School and Hospital of Chicago, which has been held by Dr. Franklin H. Martin since its organization in 1888, has been sold to Dr. William L. Baum, a member of the board of directors for fifteen years, and for several years treasurer of the institution. Dr. Emil Ries has been elected secretary, vice Dr. Franklin H. Martin, resigned, and Dr. Otto J. Stein a director, vice Dr. Frederick A. Besley, resigned.

KANSAS

Personal.—Dr. Clifford C. Nesselrode has been appointed city chemist and bacteriologist of Kansas City.——Dr. Elmore S. Pettyjohn, Topeka, has been elected a vice-president of the medical section of the National Fraternal Congress.

Bakeries Must Be Sanitary.—Cardboard posters have been sent out by the secretary of the State Board of Health for distribution to the bakeries, containing rules governing the sanitary condition of bakeries, which will be strictly enforced.

State Tuberculosis Exhibit.—The Kansas Tuberculosis Exhibit, which has been on exhibition in various towns of the state for about six weeks, is attracting a great deal of attention and a schedule has been arranged for to the first week in January.

MARYLAND

Baltimore

Acquitted.—Dr. Louis M. Harrison, charged with passing bogus checks, and confined in jail since last May, has been acquitted in the criminal court.

Spratling May Resign.—It is rumored that Dr. William P. Spratling, professor of physiology and nervous diseases in the College of Physicians and Surgeons, is about to resign, and will open a sanatorium at Summit, N. J.

Mayo to Lecture.—Dr. Charles H. Mayo, Rochester, Minn., will deliver two lectures at the University of Maryland, November 9 and 10, on "Diseases of the Thyroid Gland," and on academic day he will receive from the university the honorary degree of LL.D.

Personal.—Dr. Frank J. Sladen sailed for Europe September 22.——Mrs. Fabian Franklin, Johns Hopkins University, has returned from attendance at the Congress of Psychology, Geneva.——The mayor has nominated Dr. William H. Welch as a member of the new charter commission.——Dr. F. E. Vest has sailed for Europe.

Harriet Lane Home.—The Harriet Lane Home for Invalid Children about to be constructed at Johns Hopkins Hospital is to cost about $200,000. The buildings will conform in construction with the rest of the hospital group. The main building will be 133x65 feet, but the entire space covered by the building and observation wards will be 133x160 feet. The building will be four stories high, with a modern roof hospital, and 102 beds, all of which will have access to open or semi-open porches.

Medical College Changes.—The annual session of the Baltimore Medical College opened September 20, with an address by Dr. Ridgely B. Warfield. The following faculty changes were announced: Dr. Alexander D. McConachie has been elected professor of diseases of the ear, nose and throat; Dr. William S. Love, professor of therapeutics; Dr. Irvin Ebaugh, professor of materia medica; Drs. Josiah S. Bowen and Frank J. Powers, associate professors of diseases of the ear, nose and throat; and Dr. A. C. Beethan, dispensary physician.

MASSACHUSETTS

Bequest.—By the will of Lucius Clapp, Randolph, $5,000 is devised to the Massachusetts General Hospital, Boston, for the establishment of a permanent free bed.——By the will of the late Patrick Cassidy, a hackman of Boston, $100 is bequeathed to Carney Hospital.

Smallpox on Liner.—The steamship *Romanic*, which arrived from the Mediterranean September 9, was held at quarantine five hours on account of two persons with smallpox being among the steerage passengers. The 1,117 steerage passengers on the boat were revaccinated.

Unregistered Practitioner Fined.—Richard H. Farrell, Everett, charged with practicing medicine without having registered, is said to have been fined $100 in the Malden court, September 10. The defendant claimed to hold an A.B. from Bellevue, and a medical degree from Boston University, but was unable to pass the state examination in March, May and August, 1909.

Infant Hygiene.—At a meeting of Boston physicians August 26, presided over by Dr. Walter B. Cannon, secretary of the committee on milk and baby hygiene, an appeal was made for new milk stations at Grove Hall and Roxbury Crossing. The following officers were elected: President, Dr. Charles W. Townsend; vice-presidents, Drs. John L. Morse, Ralph C. Larrabee and Rocco Brindisi; secretary, Dr. John M. Connolly, and treasurer and director, Walter E. Kruesi.

Floating Hospital Work.—During the ten weeks from June 30 to September 7, in which the Boston Floating Hospital was in operation, 17,665 days' service were enjoyed by babies and mothers, divided as follows: Seven thousand one hundred and twelve days' service for poor patients, day and night; 4,848 days' service for day patients; 831 days' service for other children, and 4,847 days' service for mothers.——The sixteenth season of the hospital closed September 15, with the customary cruise in the harbor.——Dr. John Warren Bell, for two years resident physician, has resigned and will return to private practice in Brooklyn.——During the season 144 children died on the boat.

MISSISSIPPI

A Deadly Trio.—The Mississippi State Board of Health has issued an illustrated poem entitled, "Three Dangerous Toughs," namely, liquor, the house-fly, and the anopheles.

Improvements at University Hospital.—In addition to the original contract on the University of Mississippi Medical Building and Hospital, Vicksburg, a contract is to be let connecting the two buildings and making such improvements and interior work as may be deemed necessary before the new building is completed.

Cocain Prescriber Fined.—Dan W. Sherrod, a colored physician and druggist of Meridian, is said recently to have been convicted and fined for illegal sale of cocain. He claims that a favorite prescription of his was cocain hydrochlorate and acetanilid, equal parts, used for ulcers and wounds, but witnesses for the state, negroes arrested in a cocain debauch, swore that they regularly obtained the drug at Sherrod's drug store.——A druggist named Thorne of the same city is said to have been convicted at the same time on a similar charge and fined the same amount—$50 and court costs.

NEBRASKA

Change in Management.—Dr. Charles L. Egbert, Glenville, has assumed management of the hospital in the Madgett Flats, Hastings, which will hereafter be known as the Egbert Hospital and Sanitarium. Dr. John W. Greenman will be in charge of the surgical department.

Personal.—Dr. Robert Henry Wolcott, Lincoln, has been appointed acting dean of the Medical College of the University of Nebraska.——Dr. F. J. Peter, Omaha, has returned from Europe.——Dr. N. T. Johnston has been appointed a member of the board of health of Upland.

Presentation to Dr. Ward.—At a luncheon given in Omaha on September 3, in honor of Dr. Henry B. Ward, formerly dean of the Medical Department of the University of Nebraska, Lincoln, who has accepted the chair of zoology in the University of Illinois, Champaign, his colleagues presented him with a gold watch.

Double Red Cross Camp.—The State Board of Health has designated Tabitha Hospital, Lincoln, as a place where counties may send indigent curable consumptives. The hospital will be known as "The Double Red Cross Consumptive Camp." It is situated in the park just north of Tabitha Hospital, and is under the medical direction of Dr. Julius H. Tyndale.

NEW YORK

The Antituberculosis Conflict.—A gift of $10,000 has been made to the fund for the tuberculosis pavilion to be erected at Albany Hospital by an anonymous benefactor. The fund now amounts to $21,000.——The Board of Health of Poughkeepsie has decided to use the Eastman house for tuberculosis patients when the weather becomes too cold to allow them to remain at Camp Comfort.——The Orleans county branch of the State Association for the Prevention of Tuberculosis has been or-

ganized with Dr. Ralph Earle Brodie, Albion, secretary.—— Dr. Zina Gifford Truesdell, Warsaw, has been elected first physician of the Wyoming County Antituberculosis Society. ——The state health commissioner has approved the application of the Workingmen's Circle, a fraternal organization, to establish a tuberculosis sanatorium for its members at Liberty.

New York City

New Hospital for Long Island.—The Sisters of the Poor of St. Francis will erect a hospital to cost about $500,000 at Woodhaven, Queen's Borough, to be known as St. Anthony's Hospital.

To and From Europe.—Dr. and Mrs. John Elmer Weeks, New York City; Dr. John Osborn Polak, Brooklyn, and Dr. Gustav G. Fischlowitz, New York City, have returned from Europe.——Dr. and Mrs. George W. Jacoby have sailed for Europe.

School Acquires Property.—The trustees of the New York Policlinic Medical School and Hospital have taken title to properties at 339-349 West Fiftieth street and 346 West Fifty-first street, on which they expect to erect a hospital in the near future.

Increase in Typhoid Fever.—For the week ended August 7, there were 72 cases of typhoid fever reported; for the week ended August 14, 71; for the week ended August 21, 74; for the week ended August 28, 158; for the week ended September 4, 181; for the week ended September 11, 285; and for the week ended September 18, 276.

People's Hospital.—Plans have been filed for remodeling an old-fashioned four-story and basement dwelling on Second avenue into a home for the proposed People's Hospital; the necessary improvements will cost about $15,000 and will provide for a dormitory, wards and private rooms, operating and sterilizing rooms and nurses' room.

Bequests.—Emma A. Tillotson has given in bequests $175,000 to the Woman's Medical College, the Home for Old Men and Aged Couples, St. Luke's Hospital, Bernard College, the New York Society for the Ruptured and Crippled, the Home for Incurables, the Metropolitan Museum of Art, the New York Institute for the Blind, and the American Society for the Prevention of Cruelty to Animals.

Inquiry Into Typhoid.—More than 1,000 cases of typhoid fever have been reported to the Board of Health during the past ten weeks. The distribution of the cases is such that they cannot well be attributed to returning vacationists, and it seems quite probable that the Croton water may be to blame. Thus far the Board of Health cannot ascertain that there is any more typhoid fever in the watershed than usual. It is supposed by some that the heavy rainfall in August after a long drouth was instrumental in washing infected matter into the streams that supply the city.

The Hudson-Fulton Celebration.—Medical emergency stations are being operated during the Hudson-Fulton celebration under the direction of the Committee on Public Health and Convenience, and are divided into two classes: Field hospitals, open day and night, of which there are twenty-three, and first-aid stations, located every few blocks along the route of the land parade and along the Manhattan shore of the Hudson River. These hospitals and stations are furnished, equipped and provided with doctors and nurses by the New York county branch of the Red Cross Society and by the National Volunteer Emergency Service. To supplement the regular city ambulance service, a number of extra ambulances have been secured and these are utilized to transfer serious cases to the city hospitals. Fast ambulance launches patrol the river in the vicinity of the warship anchorage and accompany the naval parade. Ambulance stations are located at several piers to facilitate the transfer of patients from the launches to the hospitals. The hospitals of the city have made preparations to increase their normal capacity to a considerable extent during the celebration. The services rendered at any of the Public Health and Convenience Committee's stations are entirely free of charge to the public. Dr. Eugene H. Porter is chairman of the Public Health and Convenience Committee.

Buffalo

Tag Day.—The yield of "Tag Day," September 18, was more than $9,100, or $1,100 more than the estimate. This amount is to be devoted to the work of the District Nursing Association.

Will Continue to Use Hospital.—The Board of Health has decided to continue using the temporary hospital for scarlet fever which was condemned by the health commissioner, and the commissioner of public works is to decide what improvements are necessary to make the building habitable until a permanent building may be built

NEW JERSEY

Donation to Hospital.—Mrs. James M. Jarvis, Montclair, has donated $6,000 to the Mountainside Hospital in that city.

Personal.—Dr. William Todd, Tom's River, has been selected as medical inspector of the Dover township schools.——Dr. Katherine Porter has been appointed medical inspector of the public schools of Orange.

Tuberculosis Commission Named.—In accordance with the law passed by the last legislature, creating a State Tuberculosis Commission, the governor, on September 17, named as members of that body, Right Rev. James A. McFall, Bishop of Trenton; William G. Cirhauffler, Lakewood; Sidney G. M. Colgate, Orange; William C. Smallwood, Newark, and Mrs. William T. Dayton, Trenton.

August Deaths.—During August, there were 3,255 deaths reported to the Bureau of Vital Statistics, 1,040 of which were children under 1 year of age; 291 of children between 1 year and 5 years, and 742 of individuals 60 years old or over. Chief among death causes were infantile diarrhea, 656; diseases of the nervous system, 355; tuberculosis, 325; diseases of the circulatory system, 271; nephritis, 179; cancer, 164; pneumonia, 114; whooping cough, 31; typhoid fever, 29; scarlet fever, 25; diphtheria, 21, and measles, 11.

NEW MEXICO

State Railway Surgeons Meet.—At the annual meeting of the New Mexico Railway Surgeons Association, held in Roswell, September 17, Dr. John W. Colbert, Albuquerque, was elected president; Dr. George K. Angle, Silver City, vice-president; and Dr. Frank E. Tull, Albuquerque, secretary-treasurer.

State Medical Society Meeting.—At the twenty-eighth annual meeting of the New Mexico Medical Society, held in Roswell, September 15 and 16, the following officers were elected: President, Dr. John W. Elder, Albuquerque; vice-presidents, Drs. Francis T. B. Best, East Las Vegas; Robert L. Bradley, Roswell, and Leroy S. Peters, Silver City; secretary, Dr. George S. McLandress, Albuquerque; treasurer, Dr. Abraham H. Faith, Clovis; editor of the *New Mexico Medical Journal*, Dr. Francis T. B. Best, East Las Vegas; associate editors, Drs. John W. Colbert, Albuquerque; George S. McLandress, Albuquerque, and Leroy S. Peters, Silver City; and council, Drs. George W. Harrison, Albuquerque; Charles M. Yater, Roswell, and Samuel D. Swope, Deming. The next annual meeting is to be held at Albuquerque.

PENNSYLVANIA

Jewish Sanatorium Opens.—The Philadelphia Jewish Sanatoruim for Consumptives, Eaglesville, was formally opened September 22, when 10 patients were admitted. By September 25 50 patients will be cared for. The cost of the sanitarium was $40,000.

To Fight Tuberculosis.—Tuberculosis day was observed throughout Berks county, September 20, when war against the disease was begun by the Tuberculosis Aid Society. Appeals were sent broadcast throughout the county and in Reading $20,000 was raised. It is expected that the surrounding country will raise $5,000 or more. The money will be devoted to the establishment of a sanatorium for the treatment of tuberculosis.

State Society's New Flag.—At the annual meeting of the State Medical Society in Philadelphia during the present week, an official flag was unfurled at its place of meeting. This is the first official emblem in the society's history. The new banner is five feet wide and eight feet long and was the gift of the physicians of Philadelphia. The emblem has a field of the state's color, dark blue, and the state's seal in the center surrounded by the name of the society in white letters.

Enjoined from Practice.—In the case of Dr. John A. Boyd, Pittsburg, against Dr. J. O. Reed, in which the plaintiff claimed that he had bought the practice of the defendant in 1905, the latter agreeing not to engage in practice within two miles of the plaintiff's office, the judge is said to have awarded $600 damages to the plaintiff, and to have enjoined the defendant from practicing medicine in the prohibited locality.

Epileptic Hospital Investigation.—Tales of alleged brutality, mismanagement and misrule on the part of Dr. Henry M. Weeks, superintendent, and other officers and attendants of the new Pennsylvania Hospital for Epileptics and Feebleminded, Spring City, were placed before a special committee of the board of trustees at a meeting of investigation held September 8. None of the testimony heard was made public, but it was reported that some evidence had developed to support the charges. The institution was opened one year ago and

contains at present about 200 inmates, principally boys. The investigating committee is composed of Dr. George R. R. Umstad, Phoenixville; Henry W. Comfort, Falsington, and Dr. Thomas C. Detweiler, Lancaster.

Philadelphia

Released.—Dr. Joseph R. Parke, who was arrested and charged with illegally using the mails, was released of the charge recently by the Federal Grand Jury.

Personal.—Drs. James M. Anders, Alfred Stengel, Eugene L. Vansant, John H. Musser, Francis X. Dercum, George E. deSchweinitz and Donnel Hughes have returned from Europe.——Dr. J. Chalmers DaCosta is confined to the house with an affection of the eyes.——Dr. Joseph F. Harold is to fill the chair of chemistry in the Medico-Chirurgical College during the absence of Dr. George Meeker in Europe.

Typhoid's Decrease.—The report of the Bureau of Health for the first three weeks of September, concerning typhoid fever, shows that 158 cases of that disease have been reported. This is 70 per cent. less than the average for the first three weeks of September for the last three years. The mortality from typhoid fever was 248 for the year up to September 1. This is 47 per cent. less than the average mortality for the last five years.

Faculty Changes.—The following changes have been made in the faculty of the Medico-Chirurgical College: Dr. Edward B. Gleason, professor of otology; Dr. Philip Fischelis, associate professor of histology; Dr. Herbert J. Smith, assistant professor of materia medica and therapeutics, and Dr. J. Hamilton Small, assistant professor of bacteriology. Biology is to be made a part of the medical course the first year instead of being required preliminary to the course. This branch will be conducted by Charles H. Shaw, Ph.D., with special reference to the science of medicine.

Course in Public Health.—Courses in public health are being given at the University of Pennsylvania for the first time as a separate series leading to a diploma in "Public Health." The authorities of the university, recognizing the increasing demand for the services of trained men as public health officers, offer these new courses of instruction, especially designed for practical sanitation and include courses on sanitary engineering, public water supplies, theory of hydraulics, sanitary engineering of buildings, inspection of meat, milk and other animal products, practical methods used in sanitary work, personal hygiene, general hygiene, sanitary legislation, and the examination of social and vital statistics in the United States. The course of instruction covers a period of one academic year and twenty hours a week during the second term. At the close of the term all those who qualify in the final examinations will receive a diploma and will be designated as "Certified Sanitarians." Only persons holding the degree of doctor of medicine are eligible to the full course and entitled to the diploma.

TEXAS

Doctors' Building.—The Dallas Chamber of Commerce announces that a twelve-story business and office building is to be erected at Main and Poydras streets, to cost $500,000, and to be utilized for offices for medical practitioners and dentists.

Personal.—Dr. John H. Florence, state quarantine officer at Galveston, has resigned to become chief medical officer of the Great Southern Life Insurance Company, Houston.——Dr. Edward B. Parsons, Palestine, formerly physician of Anderson county, has been made county health officer.

New Laboratories.—Under the provisions of the thirty-fourth legislature, creating a state board of health, Dr. E. H. Lancaster, state bacteriologist, has fitted up in the state health department, Austin, a chemical and bacteriologic laboratory. ——Dr. George W. Larendon, health officer of Houston, announces that the equipment for the new city laboratory is ready and that the laboratory will soon be opened. The bacteriologic department is to be under the direction of Dr. Felician J. S. Lataper.

College Matters.—The opening exercises of the Fort Worth Medical College were held September 27.——The work of the State University of Texas Medical Department, Galveston, began October 1. Under the new requirements, the applicant for matriculation must be a graduate of a high school, and next year a more severe requirement is to be exacted, that the student must have been engaged in one year's work at some recognized college or academic school. Dr. Harry O. Knight has succeeded Dr. Henry Hartman as demonstrator of pathology, and Dr. E. E. Calloway has succeeded Dr. H. T. Aynesworth as demonstrator of anatomy.

UTAH

Hospital Notes.—The Dee Memorial Hospital, in memory of the late Thomas Dee, is to be four stories in height, and will accommodate 85 patients.——Dr. Andy J. Stewart, Mount Pleasant, is preparing to build and equip a modern hospital at that place to fill a need long experienced for such an institution in southern Utah.

Personal.—Dr. Ross Anderson has resigned as professor of bacteriology and pathology in the University of Utah, and has been succeeded by Dr. Frank A. McC. Jenkin, Ann Arbor, Mich.——Dr. E. G. Hughes has succeeded Dr. James E. Hosmer, resigned, as city physician of Provo.——Drs. Julius L. Arntzen, Elsinore, and Thomas Ray Gledhill, Ruthfield, have been appointed quarantine physicians of Sevier county.

Declares Against Publicity.—The Utah County Medical Society, at a meeting held in Provo, September 9, adopted resolutions protesting against the publication of medical cases and naming the physicians connected therewith, and instructed the secretary to notify newspapers to this effect, and request reporters and papers to refrain from publishing names of physicians, places of operation, etc., without express permission from the attending physician.

GENERAL NEWS AND COMMENT

A Correction.—In THE JOURNAL, September 18, page 842, in the discussion on the Serodiagnosis of Syphilis, the remarks ascribed to Dr. Frank E. Fox, Fulton, N. Y., should have been accredited to Dr. Howard Fox, New York City.

Obstetricians and Gynecologists Elect Officers.—At the annual meeting of the American Association of Obstetricians and Gynecologists, held in Fort Wayne, Ind., September 21-23, the following officers were elected: President, Dr. Aaron B. Miller, Syracuse, N. Y.; first vice-president, Dr. Charles N. Smith, Toledo, O.; second vice-president, Dr. Raleigh R. Huggins, Pittsburg, Pa.; secretary, Dr. William Warren Potter, Buffalo (re-elected); and treasurer, Dr. Xavier O. Werder, Pittsburg, Pa. Syracuse was selected as the place and September 20, 21 and 22, 1910, as the time for holding the next annual meeting.

Public Health Association Meeting.—The preliminary announcement of the thirty-seventh annual meeting of the American Public Health Association to be held in Richmond, Va., October 19-22, under the presidency of Dr. Gardner T. Swarts, Providence, R. I., states that the Jefferson Hotel is to be the headquarters for all meetings; that a joint session of the Laboratory Section and Section of Municipal Health Officers is proposed, at which Drs. William H. Welch, Harvey W. Wiley and John S. Fulton have promised to read papers on the relation of laboratory work to executive work, and the problems which concern both executive and laboratory men, and their relations to each other. The Section of Municipal Health Officers proposes to take up the following subjects: Appointment and supervision of employees in the municipal sanitary service; the relation of the municipal health department to the city government generally, and to other branches of the city government; the control of the food supply; the prevention and abatement of nuisances; the prevention of the spread of communicable diseases of man; the prevention of the spread of communicable diseases of animals; the medical inspection of schools; the improvement of the physical condition of city dwellers; municipal vital statistics and municipal health laws.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, Sept. 18, 1909.

The Hospital Question

With the progress of medical science and the greater development of specialism there is an increasing tendency on the part of the public to seek hospital treatment. This is no doubt partly due to the fact that while competition has lowered the fees of general practitioners sometimes to such a low figure as to render proper treatment impossible or at any rate improbable, only the hastily prescribed stock mixture without proper examination being remunerative, on the other hand the fees of specialists have not only shown no tendency to fall but have actually risen. Some statistics which have recently been compiled show that there are 796 hospitals in the United Kingdom with a total income of $18,000,000. In addition there are 206 dispensaries with an income of $1,160,000, of institutions for the chronic and incurable there are 43, with an income of $1,190,000, and 242 institutions for the convalescent with an income of $1,750,000. Thus $22,000,000 is spent in the relief of the sick by institutions supported by the

charitable, to say nothing of the poor-law infirmaries and fever hospitals which are supported by the state. The services of the physicians, which are given without payment (excepting some small salaries for house physicians and surgeons), do not enter into this total of expenditure. The profession is always bewailing the fact that it gives so much away, but there is always the keenest competition for these unpaid posts, because they are the only portal to the select class of consultants and specialists, who receive fees about twenty times as great as the average physician. It might fairly be argued that their services to the hospitals are not unremunerated but are paid by the enhanced fees of their rich patients; their interests are, therefore, in one sense diametrically opposed to those of the general practitioner. Their object is to get sufficient material experience to make a reputation in whatever line of work they take up and the question whether the patients could pay the small fees of the general practitioner does not concern them. However, there are many cases in which the patients could pay those fees but their case is a special and difficult one, requiring the skill of the specialist, whose much larger fees they could not pay. They are then legitimate cases for hospital treatment and indeed are often sent there by the general practitioner under these circumstances. From time to time the question of hospital abuse by those able to pay for medical advice is discussed by the British Medical Association and various other medical societies and resolutions are passed and recommendations made to hospital committees. But these committees consist of laymen, sometimes with a small sprinkling of the consultants on the hospital staff who are in little sympathy with the general practitioner. In some hospitals, however, a method has been adopted of stemming the torrent of abuse by appointing inquiry officers to investigate the financial position of those applying for relief by visits to their homes, etc.

Thief Discovered by a Thermometer Reading

The death of Dr. Whitelaw of Kirkintilloch, Scotland, has revived the following interesting story of his early career. Being called up one night many years ago he was walking with the messenger, when he was attacked and knocked down in a lonely road in the outskirts of Glasgow. His pockets were rifled and he was left lying in the road with a fracture of the fibula. One of the articles stolen was a clinical thermometer with which he had that evening taken the temperature of a patient suffering from typhoid fever. He remembered what the temperature registered and also that he had not shaken down the mercury before putting the thermometer back in his pocket and communicated these facts to the police. Some time afterward a thermometer registering the identical temperature was discovered in a pawn shop in Glasgow. By this means the police were enabled to track the doctor's assailants and to arrest them.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, Sept. 10, 1909.

The Medical Record Book in the Marine Service

M. Henri Chéron, assistant secretary of the navy, has just decided on the issue of a medical record book for each man in the marine service, similar to one used in the army on land, in which will be entered the marine's height, weight, chest measurements and acuteness of visual and auditory perception. This book will follow the man wherever he goes. The military medical officers will set down there the results of their examinations, the names of the diseases treated, admissions to hospital, convalescence, etc. This book will permit the medical officers, whose task is particularly difficult because of the incessant changes to which the marine service is subject, to watch over and to treat their patients more easily. Moreover, the examination of this record book will be particularly useful at the time of reenlistment or reengagement, in order to avoid taking on men who are unfit for service. The medical record book will be passed from physician to physician, under sealed cover, and the disease treated, when of a confidential nature, will be indicated only by number. The injuries or accidents which might entitle the man to a pension will be very exactly described in this record.

Measures Against Cholera

About a year ago, in view of the epidemic of cholera which was raging in Russia, the French government put in force a series of preventive measures (THE JOURNAL, Oct. 10, 1908, lii, 1245). The terrible scourge has now entered Holland, where twenty-four cases were recorded during the first week of September. Therefore, a decree is about to be issued according to which a watch will be kept over all persons entering France by river or canal.

Fraudulent Assumption of the Doctor's Degree

All our political journals are filled with pseudoscientific articles which really are only advertisements of pharmaceutical products, signed by self-styled physicians.

The law of 1892 in regard to the practise of medicine took cognizance, indeed, of the fraudulent assumption of the doctor's degree, but it provided no punishment except in connection with the illegal practise of medicine, in which case the offense was aggravated and the penalty was greater. Illegal practise is punished by a fine of $20 to $100 (100 to 500 francs), and for a second offense, $100 to $200 (500 to 1,000 francs). Illegal practise with fraudulent assumption of the doctor's degree is punished by a fine of $200 to $400 (1,000 to 2,000 francs), and for the second offense, $400 to $600 (2,000 to 3,000 francs); moreover, the delinquent is subject to imprisonment of six months to a year. As proof of the practise of treating patients is necessary, according to our law, in order to constitute the offense of the illegal practise of medicine, the mere fact of assuming the doctor's degree in the daily papers or in pamphlets does not constitute a legally punishable offense. The Association of Medical Journalists (*Association des journalistes médicaux*) has repeatedly discussed the question of pretended doctors, and decided to recommend to the various scientific and journalistic associations action against the false assumption of degrees.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, Sept. 15, 1909.

Campaign Against Proprietaries

The ever-increasing abuse of proprietary medicines has at last called forth protests from both physicians and the official apothecaries. Naturally, the government—the panacea in this country—has been expected to protect the interests of the public as well as those of the profession, but the expectation has not been fulfilled because of the powerful mercantile influences that are behind the proprietary medicine business. A resolution was recently passed at the regular meeting of the Silesian Medical Council (*Aerztekammer*) and forwarded to all "sister" councils in Austria for consideration, so that uniform action might be taken. The resolution aims to formulate some method by which the sale of proprietary medicines may be controlled. Two methods have been suggested. One is the proposal that a tax of 50 per cent. of the sale price of proprietaries shall be imposed on such medicines. The tax thus levied is to be devoted to public health purposes, etc. The chief objection to this plan is that practically the sale of such medicines would hardly be restricted, but the public would have to pay 50 per cent. more for its credulity. The second plan suggested and the one which has more probability of being carried, recommends that all proprietary medicines shall be sold only under the following conditions: They must not be advertised in any but medical periodicals. The labels and containers must have only the names of the articles and the names of their manufacturers or proprietors, and must not contain the names of any of the diseases for which the remedy is recommended. [This requirement is practically identical with Rule 4 of the Council on Pharmacy and Chemistry, which debars from admission to New and Nonofficial Remedies any article "whose label, package or circular accompanying the package, contains the names of diseases in the treatment of which the article is said to be indicated."—ED.] The manufacturers of proprietary medicines which contain potent drugs, may have to submit evidence regarding the composition and the claims made for these articles. The advantages of this second plan are so numerous that it is expected that it will be adopted.

The Winter Semester

The winter semester of the Vienna University begins officially with the first Monday in October, but some classes begin earlier, while the regular semestral classes do not start before the eighteenth. Amongst the new professors, whose lectures are looked forward to with eager interest, are those of the eye and the gynecologic clinics; they are not yet appointed, but the decision of the ministry of education is expected in October. A number of classes by serologists and pathologists dealing with the latest additions to modern serology are announced, otherwise the number of regular lectures is the same as usual. Including the classes by privat-docents and assistants, no less than 460 courses and classes will be held by the

medical faculty of the Vienna University from October till March. The fee is generally from $10 to $25; the duration is from sixteen to twenty-four hours, except in regular semestral classes, lasting six months.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, Sept. 8, 1909.

The Etiologic Significance of Spirochæta Pallida

After the significance of *Spirochæta pallida* as a cause of syphilis has been established apparently without dissent, there suddenly appears an article in the *Deutsche medizinische Wochenschrift* from the well-known bacteriologist, Schereschewsky, that is calculated to reopen the question. In his article, which is a reproduction of an address at the International Congress at Budapest, Schereschewsky communicates the results of further investigations which he has made on the culture of the *Spirochæta pallida* at Neisser's clinic at Breslau in pursuance of the work which he published a few months ago. He has succeeded in cultivating the spirochete, but he has not been able to infect animals with these cultures. In spite of an observation period of from one to four and a half months, none of his inoculations gave rise to an affection which could be regarded as syphilis. He meets the question of the significance to be attached to the unsuccessful animal inoculations by himself and others, by asserting a doubt whether the *Spirochæta pallida* is really the exciting cause of syphilis. We must not hesitate, he remarks, to subject to renewed criticism the relation of Schaudinn's spirochete to syphilis which was so readily accepted. It may be possible, indeed, that the spirochetes have lost their virulence by cultivation; such behavior, however, has never been observed in cultivated microorganisms. It might also be possible that the spirochetes cultivated by Schereschewsky in spite of their microscopic resemblance were not the genuine *Spirochæta pallida* which causes syphilis. It would be a severe criticism of the author to accept this explanation; he has hitherto believed that he was able to recognize the *Spirochætæ* in spite of their morphologic variability. If his skill in this respect is to be doubted it would be necessary to doubt the diagnostic significance of the finding of the *Spirochætæ* in general. There is no question that this article, which has been prepared by an experienced author under the supervision of Neisser, will attract the greatest attention.

Advent of Cholera

Cholera has now been introduced into Holland by sea, and 15 cases with 10 deaths have occurred at Rotterdam. There are 74 suspected persons under medical supervision. Undoubtedly, the cholera was introduced from Russia. In St. Petersburg, since the beginning of the present cholera epidemic, about 14,000 persons have been attacked, and 5,500 have died of the disease.

Pharmacology

[CONTRIBUTION FROM THE CHEMICAL LABORATORY OF THE AMERICAN MEDICAL ASSOCIATION]

ANUSOL HEMORRHOIDAL SUPPOSITORIES

W. A. Puckner and L. E. Warren

An abstract of an article concerning "anusol suppositories" was published in THE JOURNAL, Jan. 23, 1909. This gave the results of an analysis by a foreign chemist, J. F. Suyver, which were to the effect that "anusol suppositories" contained no "anusol." Schering & Glatz, the American agents for "anusol" suppositories, took exceptions to the abstract, asked that THE JOURNAL retract, and submitted the findings of a chemist in support of their claim that the suppositories do contain "anusol." To determine the composition of "anusol hemorrhoidal suppositories" as they are found on the American market, trade packages were purchased (April 6, 1909) and submitted to examination in the Association's laboratory.

According to the claims of the manufacturers, 12 suppositories contain:

"Anusoli	7.5 grams
"Zinc oxid	6.0 grams
"Balsam Peruv.	1.5 grams
"Ol. theobrom.	19.0 grams
"Ungt. cerat.	2.5 grams"

Calculated to percentages the formula reads:

Anusoli	20.54 per cent.
Zinc oxid	16.44 per cent.
Balsam Peruv.	4.11 per cent.
Ol. theobrom.	52.06 per cent.
Ungt. cerat.	6.85 per cent.

When this product was submitted to the Council some time ago, Schering & Glatz stated that, according to the manufacturer, "anusol" is the "iodo resorcin sulphonate of bismuth, having the following rational formula: $[C_6H_2ISO_2.O(OH)_2]_3Bi$. In the meta-dioxybenzol $C_6H_4(OH)_2$, the resorcin, one H has been replaced by one I, and for another H the sulfonic-acid group So_2-OH has been substituted, so that meta-dioxybenzol is transformed into $C_6H_2ISO_2$-OH(OH)$_2$. In the sulfonic acid the H of OH is replaced by Bi and, as Bi is trivalent the above rational formula results."

According to this formula "anusol" should contain:

Iodin	32.99 per cent.
Sulphur	8.34 per cent.
Bismuth	18.07 per cent.

And the "anusol" suppositories should contain:

Iodin	6.77 per cent.
Sulphur	1.71 per cent.
Bismuth	3.71 per cent.

Examination[1] showed that the suppositories contain about 0.08 per cent. iodin, or 1.2 per cent. of the amount claimed; 0.28 per cent. sulphur, or 16.3 per cent. of what is claimed; 0.71 per cent. bismuth, or 19 per cent of what is claimed; and zinc equivalent to 16.5 per cent. zinc oxid, or about 100 per cent. of claim.

From the standpoint of the iodin content alone, assuming that all of the iodin found is present in the form of "anusol," the results of the examination of the product (as found on the American market) verifies, for all practical purposes, Suyver's statement that "anusol suppositories contain no anusol," for the quantity of iodin present is so minute (about 1/82 of that required by the formula) as to be unworthy of serious consideration. The presence of sulphid in appreciable amounts was demonstrated showing that the sulphur is present, at least in part, in the form of sulphid and not as sulphonate as is claimed. In a measure, too, this is in accord with the findings of Suyver, who concluded that, in the product which he examined, the bismuth was present in the form of sulphid. The proportions of sulphur and of bismuth (respectively about 1/6 and 1/5 of the required amounts) indicate still further that the product is not all that it is claimed to be.

A specimen submitted by Schering & Glatz to the Council two years ago contained 0.09 per cent. iodin, or 1.3 per cent. of the amount claimed; 0.23 per cent. sulphur, or 13.4 per cent. of the claimed amount; and 0.52 per cent. bismuth, or 14 per cent. of what is claimed by the formula. Since the above determinations were made another specimen of Anusol Hemorrhoidal Suppositories was received from Schering & Glatz, July 16, 1909. This sample was found to contain about: 0.075 per cent. iodin, or 1.1 per cent. of the amount required by the formula; 0.265 per cent. of sulphur, or 15.5 per cent. of the requirement and 0.88 per cent. bismuth, or 23.7 per cent. of the required amount. It will thus be seen that the composition of the oldest specimen and also that of the specimen recently sent, corresponds in a general way with that of the one first examined.

Whether judgment be based on the determination of the bismuth, the sulphur or the iodin, the results just given clearly show that the claims made concerning the composition of "Anusol Hemorrhoidal Suppositories" are not substantiated by the facts.

Hayes Asthma Cure

To the Editor:—Kindly give me information concerning "The Hayes Method for Asthma and Hay Fever," concerning which I enclose a circular. E. PARRISH, Brooklyn.

ANSWER.—The Hayes asthma remedies were analyzed in the pharmaceutical institute of the University of Berlin by J. Kochs, and, according to the *Arbeiten aus dem Pharmazeu-*

1. Details of the quantitative analysis of "Anusol Hemorrhoidal Suppositories" will appear in the annual report of the Chemical Laboratory of the American Medical Association, or they may be had on request.

tischen Institut der Universität, Berlin, vol. iv, p. 122, with the following results. Six of the seven remedies were examined:

1 (Labeled No. 781).—A cough medicine for use in colds, catarrhs, bronchitis and for the relief of asthma. Dose 20 to 30 drops. This is said by the analyst to contain about 6.5 per cent. of oils, consisting chiefly of oils of turpentine and peppermint, emulsified and sweetened with syrup.

2 (Labeled T. I. Q.).—A remedy that is to be taken in doses of 15 minims three times a day before meals. According to the report, it contained 13.7 per cent. of iodin in the form of potassium iodid, to which had been added a little wine and a small percentage (0.1) of hydrochloric acid.

3 (Labeled No. 769 A.-C.).—A remedy to be given in doses of 30 minims at bedtime, to be repeated two or three times in several hours. This, says Kochs, was a slightly reddish syrup containing 6.7 per cent. of iodin combined as potassium, sodium and ammonium iodids.

4 (Labeled T. II Q.).—A preparation to be taken in doses of 15 minims three times a day immediately after meals. The analytical report shows it to contain 1.08 per cent. of iron in the form of an iron peptonate.

5 (Labeled No. 808).—These were small capsules filled with 0.1 gm. (1.5 grs.) of a loose white powder. It is said "to strengthen the lungs and reduce the tendency to taking cold." Analysis is said to have disclosed that it consisted of quinin sulphate.

6 (Labeled No. 763).—Small white sugar-coated pills. These are said to act mildly on the liver and regulate the digestion. The active principle of these pills as shown by the analysis was resin of jalap.

Correspondence

Expression of Cataract in Its Capsule

To the Editor:—The letter of Major Henry Smith, I. M. S., in THE JOURNAL, Sept. 11, 1909, needs an answer because of the bias of this "most interesting man in the world."

With all due deference to the great experience of Major Smith, which has never even been approached by any other operator, and to the details of the operation which he (Smith) claims as his own, yet I consider that a slightly larger incision than that described in the original essay of Pagenstecher in 1865, and small modifications claimed in the procedure should not take away the honor of priority of description and practice of the procedure from Pagenstecher and give the operation the name of Smith of Jullundur.

Indeed, as has been noted in Greene's and my papers, the same operation was done even before the time of Pagenstecher, although not generally practised. In Benjamin Bill's "System of Surgery," reprinted in Boston in 1791, it is noted that a French oculist regularly operated in suitable cases by removing the lens in its capsule.

The expression operation is specifically described by Pagenstecher and Elschnig as follows:

Nach dem Drittelbogenschitt nach oben mit Bindehautlappen wird iridectomiert und hierauf die Linse, entweder durch das blosse Druckmanöver oder mit dem flachen Löffel der bloss als Gleitfläche dient, entbunden.

The lens is expelled after incision of about one-third of the circumference made with a conjunctival flap and an upward iridectomy either by means of gentle pressure or with the flat spoon acting purely as a gliding surface.

I have had occasion to look over my collection of so-called Pagenstecher spoons and among the seven which I possess find only one which in any way corresponds with the cup-shaped instrument depicted by Smith. The others all offer the gliding surface as described above.

Why then did I not quote Pagenstecher's writings on "Expression of Cataract in the Capsule" between 1888 and 1908? My position as editor of *Ophthalmology* and kindred publications for the past twenty years gives me rather an exceptional command of ophthalmic literature, yet I am not aware that there have been any such publications of his during this time!

The necessity for at least a 3/5 incision of the sclerocornea or a larger one when purely in the cornea has been pointed out by other writers besides Smith and myself. While I am favorable to the operation of expression of cataract in its capsule it is yet *sub judice*, and it must be proved that it is "the best operation in the world" by its ultimate results.

H. V. WÜRDEMANN, M.D., Seattle, Wash.

Tubercle Bacilli in the Blood—A Claim for Priority

To the Editor:—Referring to your editorial, "Tubercle Bacilli in the Blood," in THE JOURNAL of Sept. 18, 1909, I wish to call attention to the fact that in May, in a paper by Dr. Lyons and myself, which was read before the Louisiana State Society, in which we reported failure to confirm certain observations of Rosenberger, appears the following anent the presence of contaminating organisms in distilled water: "The danger of this occurrence is easily obviated by using water very recently distilled, or direct from the still, and by the thorough cleansing of the jars before using by means of a strong solution of mineral acid." As we were the first to report failure to confirm observations made by Rosenberger and encountering the error, corrected and reported on it, I believe that it should be credited to us and not to Brem. We went through the experiences which he reports in THE JOURNAL, in our paper directed attention to Rosenberger's faulty technic, and gave a method of overcoming the difficulty, and reported this some four months ago. I will thank you for giving this letter publication.

M. P. BURNHAM, M.D., Harrisonburg, Va.

Rhinology at the International Medical Congress

To the Editor:—The papers and discussions of the diseases of the accessory sinuses have been of special interest to rhinologists at the Sixteenth International Congress. Whereas, up to comparatively recent date, the pendulum had swung to ultraradicalism, at the congress it was evident that return had been made to safer measures. The authors of papers that were read and all of those who discussed the subject, with the single exception of Jansen, were strongly in favor of conservative measures except in extreme and rare cases. It was admitted that the radical operation did not usually result in quicker recovery than could be obtained from the less severe and more conservative operations. It was further admitted that these extreme operations were the cause of many deaths. About a dozen papers on these subjects were presented. Among those who read or discussed the papers were Dundas Grant (London), Uchermann (Christiania), Bourack (Charkoff), Jansen (Berlin), Killian (Freiberg), Chiari (Vienna), Massei (Naples), myself and several others whose names I do not now recall. Naturally great weight is given to the change of sentiment by the attitude of Killian, whose work along these lines is well-known. It is to be hoped that the preponderance of evidence brought out will result in placing the radical operation in its proper position, that is, an operation of the last resort.

E. FLETCHER INGALS, Chicago.

Warning Against Book Agent

To the Editor:—At present there is traveling through the southern states, a man reported to us to be about 35 or 40 years of age, clean-shaven face, weighing 250 or 265 pounds, about 6 feet high.

He is calling on physicians and others offering to sell them forty books for $20, and to make them local agents for the Lippincott Publishing Co. So far as we know, there is no concern in this country of that name. After securing the $20 or $25, nothing more is heard of this agent, and as the complaints come to us we have reason to believe that he is working on our reputation. He has been working through Louisiana, Mississippi and Arkansas, and has used the names of Bradford, Howard and Hackett, with various initials.

Judging from the numerous complaints received, his operations are extensive and successful from his standpoint.

We are doing all we can to have the police notified, and the man apprehended, though, of course, we cannot prosecute, as we have not been injured or victimized.

J. B. LIPPINCOTT CO., Philadelphia.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

CHRONIC CEREBRAL HYPEREMIA

To the Editor:—Please outline the treatment (dietetic, hygienic and medicinal) which has been found the most satisfactory for chronic cerebral hyperemia. The patient is a woman, aged 30, unmarried, and has been a sufferer for about seven years. Acute exacerbations have been noted during that period, varying from twice a week to once a month. They are usually preceded by nausea or vomiting, but not in every instance. Dietetic indiscretions have been interdicted and corrected. Refractive errors have been corrected. There is no malformation, lack of function or pathologic disturbance of the uterus or appendages. The patient is a worker on fine oriental rugs. While this may be to some extent a factor, it seems more probable that the disease was induced by extreme mental anxiety due to her father's financial misfortunes and subsequent death. The family history is good.

J. C. C., Philadelphia.

ANSWER.—Modern neurology does not recognize "chronic cerebral hyperemia" as a unique and separate disease. In the "chronic" form, congestion of the brain is always secondary to some other pathologic condition. The congestion may be active (arterial), or passive (venous); but in either case, physical obstruction to the circulation as from tumor, or disease of some sort of the vascular apparatus, is the real malady to be diagnosed and treated. There is no treatment for "chronic cerebral hyperemia" apart from the treatment of the underlying condition of which it is a secondary result. The symptoms that used to be attributed to cerebral hyperemia are now known to be due, when dependent on the intracranial circulation at all, to the quality of the blood and the speed of the current, rather than to the quantity. The anastomoses of the intracranial circulation are so abundant that cerebral hyperemia, except when it is secondary to, and a part of, some other pathologic state, is always a temporary affair. The treatment for temporary congestion of the brain is so well known as to need no special outline here.

The case noted above is not reported in sufficient detail to permit of a diagnosis. If further data can not be obtained from a thorough physical examination of the patient, "the extreme mental anxiety due to the father's financial misfortunes and his subsequent death," coupled with the fact that she "is a worker on fine oriental rugs" may legitimately awaken the suspicion of a psychoneurosis of the hystero-neurasthenic form. A further examination along this line, however, would be needed to establish the diagnosis. The hygienic, dietetic and medicinal treatment of a psychoneurotic patient, in whom there are hysterical and neurasthenic manifestations, is too large a subject for full consideration here; and its details depend on too many contingencies to permit of the formulation of a single scheme.

If the case is one of hysteria, the treatment should be preeminently along psychotherapeutic lines. Psychasthenia, unlike hysteria, is somewhat of a mental inefficiency. The treatment of hysteria, however, is more or less applicable to psychasthenia, with perhaps somewhat greater stress laid on rest, nutrition and a general tonic regimen. Neurasthenia, unlike hysteria and psychasthenia, calls most loudly for prolonged rest and increased nutrition. The entire course of the treatment of neurasthenia should occupy not less than six weeks. The hygiene of the patient, of course, should be of the best. Proper clothing, cleanliness, and regular habits are the requirements here. The dietetics involve no particular line of food; nutrition being the great desideratum, all foods that the patient can digest and assimilate should be tried and pushed to the limit of the physiologic powers of the alimentary organs. Water should be abundantly taken. A few simple tonics, such as iron, arsenic, strychnin, quinin, continued for a long period of time in very moderate dosage, conclude practically the medicinal treatment of nervous exhaustion.

In general practise most of the cases seen are hystero-neurasthenic. A hysterical woman exhausts her nervous mechanism; and a neurasthenic individual sooner or later develops a hysteroid state of mind. The treatment of these patients, therefore, calls for a combination of the methods briefly outlined above.

SOLUBILITY OF PHENOL (CARBOLIC ACID)

To the Editor:—In an editorial in THE JOURNAL (September 18, p. 954) in the discussion of tetanus appeared the statement to cauterize the wound with a "25 per cent. phenol solution." Evidently a 25 per cent. aqueous solution was to be understood. Statements are so frequently made by physicians about 25 per cent. and 50 per cent. solutions of phenol in water at ordinary room temperature that one is forced to think that some of them are not familiar with the solubility relations of water and phenol. The ease with which possibly serious burns might be produced makes a knowledge of these relations important. At ordinary room temperature (25 degrees C), if an attempt is made to obtain a 25 per cent. solution of phenol in water, two immiscible solutions will separate in two layers, the lower layer containing 75 per cent. phenol and the upper layer containing 7.5 per cent. phenol. A fairly thorough exposition of these solubility relations may be found in "The Phase Rule and Its Applications," by Alexander Findlay, on pages 95-8.

C. R., Kansas City, Mo.

ANSWER.—While the failure to state that the 25 per cent. solution of phenol should be "in glycerin or alcohol" was open to criticism, nevertheless, the facts regarding the solubility of this agent have been so often reiterated and its use is so common that details would seem to be scarcely necessary.

TECHNIC OF THE WASSERMANN TEST

To the Editor:—Please give reference to the best description of the technic of the Wassermann test in the medical literature of this country.

N. EVANS, Nashville, Tenn.

ANSWER.—Good descriptions of the technic of the Wassermann test are given in the following:

Fleischmann, P. and Butler, W. J.: Serum Diagnosis of Syphilis, THE JOURNAL A. M. A., Sept. 14, 1907, xlix, 934.

Fox, H.: The Principles and Technic of the Wassermann Reaction and Its Modifications, *Med. Rec.*, March 13, 1909, lxxv, 421.

Reference may also be made to the following:

Castelli, E.: The Technic of the Wassermann Reaction, *New York Med. Jour.*, April 17, 1909, lxxxix, 777.

Butler, W. J.: Serodiagnosis of Syphilis, *New York Med. Jour.*, Jan. 30, 1909.

HEADACHE FOLLOWING ADMINISTRATION OF POTASSIUM IODID AND FOWLER'S SOLUTION

To the Editor:—All of our authorities teach that small doses of Fowler's solution will prevent the eruption so common in the administration of potassium iodid. In the past few years I have given it in small doses, but invariably my patients would suffer with an unbearable headache.

I have never seen this mentioned in any medical literature, and I would like some explanation. I am certain that the headache is not a mere coincidence.

J. J. HARDY, Poteau, Okla.

The Public Service

Medical Department of the Army

Changes for the week ended Sept. 25, 1909:

Kean, J. R., lieut. col., detailed to attend meeting of American Public Health Association at Richmond, Va., Oct. 19 to 22.

Murtagh, J. A., Van Poole, G. M., Reno, W. W., Gosman, G. H. R., Koerper, C. E., Allen, J. H., Patterson, R. U., Noble, R. E., Van Dusen, J. W., Grubbs, R. B., Sweazy, V. E., capts., ordered to report at Washington, D. C., for examination for promotion.

Truby, A. E., major, granted leave of absence for 1 month.

Brooks, W. H., Barney, C. N., McAndrew, P. H., De Witt, Wallace, Thornburgh, R. M., capts., ordered to report at San Francisco, Cal., for examination for promotion.

Marrow, C. E., major, relieved from duty at the Presidio of San Francisco, Cal., and ordered to Fort D. A. Russel, Wyo., for duty.

Davis, A. D., 1st lieut., relieved from duty at Fort Lawton, Wash., and ordered to Vancouver Barracks, Wash., for duty.

Little, W. L., capt., ordered from Fort Adams, R. I., to Fort Ontario, N. Y., for temporary duty.

Dutcher, B. H., major, granted leave of absence for 15 days.

Wadhams, S. H., major, granted leave of absence for 4 months, when relieved at Fort Shafter, H. T.

Fuller, L. A., major, granted an extension of 1 month to his leave of absence.

Harris, H. S. T., lieut. col., ordered to assume temporary charge of medical supply depot, at San Francisco, Cal.

Craig, C. F., capt., relieved from duty as attending surgeon at New York City, and ordered to Washington, D. C., for duty as assistant curator, Army Medical Museum.

Artaud, F. E., Dougherty, J. C., Hughes, M. E., M. R. C., relieved from duty in the Philippines Division, and will sail December 15, for San Francisco, Cal.

Lemmon, Robt., Conzelmann, F. J., Watkins, V. E., M. R. C., relieved from duty at their present stations and will proceed to San Francisco to sail November 5, for Manila, P. I.

Kershner, W. E., M. R. C., ordered to active duty, and to proceed from Waterville, Me., to Fort Hancock, N. J., for duty.

Maloney, J. E., M. R. C., relieved from duty at Fort Hancock, N. J., and ordered to duty at Seattle, Wash., on the transport *Burnside*.

Lowe, T. S., M. R. C., relieved from duty on the transport *Burnside*, and ordered to duty at the Presidio of Monterey, Cal.

Wiggin, D. C., M. R. C., granted leave of absence for 1 month.

Heterick, R. H., M. R. C., ordered to active duty, and to proceed to Fort Oglethorpe, Ga., for duty.

Cohen, H. M., M. R. C., ordered to active duty, and to proceed to Fort Rodman, Mass., for duty.

Lyon, W. C., M. R. C., ordered to active duty, and to proceed to Fort Du Pont, Del., for duty.

Lavanture, L. A., M. R. C., ordered to active duty, and to proceed to Fort D. A. Russell, Wyo., for duty.

Hallett, H. J., M. R. C., ordered to active duty, and to proceed to Fort Totten, N. Y., for duty.

Sharpe, H. H., M. R. C., ordered to active duty, and to proceed to Fort Jay, N. Y., for duty.

Sherwood, J. W., M. R. C., ordered to active duty, and to proceed to Fort Williams, Me., for duty.

Dawe, C. W., M. R. C., ordered to active duty, and to proceed to Fort Thomas, Ky., for duty.

Miltenberger, V. E., M. R. C., ordered to active duty, and to proceed to Fort Riley, Kans., for duty.

Browne, R. W., M. R. C., ordered to active duty, and to proceed to Fort Monroe, Va., for duty.

Griffin, J. C., M. R. C., ordered to active duty, and to proceed to Fort Howard, Md., for duty.

Borden, W. B., M. R. C., ordered to active duty, and to proceed to Fort Bayard, N. M., for duty at the Army General Hospital.

Northington, E. G., M. R. C., ordered to active duty, and to proceed to Fort McPherson, Ga., for duty.

Hart, J. W., M. R. C., granted leave of absence for 2 months, at the expiration of which he will stand relieved from active duty in the M. R. C.

Watkins, V. E., M. R. C., granted leave of absence for 15 days.

Jones, G. B., M. R. C., granted leave of absence for 1 month.

Medical Corps of the Navy

Changes for the week ended Sept. 25, 1909:

Huntington, E. O., surgeon, ordered to the Naval Recruiting Station, Chattanooga, Tenn.

Williams, R. B., surgeon, commissioned surgeon from Oct. 11, 1909.

Fauntleroy, A. M., P. A. surgeon, ordered to the *Indiana*, and additional duty in connection with the *Lancaster*.

Reed, E. U., P. A. surgeon, detached from the Naval Recruiting Station, Nashville, Tenn., and ordered to Naval Hospital, Norfolk, Va., for duty .

Sutton, D. G., asst.-surgeon, detached from the *Vestal*, and ordered to the *Des Moines*.

Donelson, M., asst.-surgeon, detached from the Naval Recruiting Station, Chattanooga, Tenn., and ordered to the Naval Recruiting Station, Nashville, Tenn.

Flint, J., asst.-surgeon, detached from the Naval Hospital, Philadelphia, Pa., and ordered to the Naval Hospital, Navy Yard, Boston, Mass.

Crandall, R. P., surgeon, ordered to the *Hancock*.

Seaman, W., P. A. surgeon, ordered to the Naval Hospital, Navy Yard, New York.

The following Acting Assistant Surgeons have been detached from the places opposite their names and ordered to Instruction at the Naval Medical School, Washington, D. C., Sept. 21, 1909:

G. E. Robertson, detached Naval Hospital, Boston, Mass.
J. J. A. McMullin, detached Naval Hospital, Newport, R. I.
J. T. Johnson, detached Naval Hospital, Philadelphia, Pa.
W. L. Irvine, detached Naval Hospital, Boston, Mass.
H. E. Jenkins, detached Naval Hospital, Norfolk, Va.
D. C. Walton, detached Naval Hospital, Norfolk, Va.
A. B. Cecil, detached Naval Hospital, New York City.
W. H. Connor, detached Naval Hospital, Norfolk, Va.
E. W. Phillips, detached Naval Hospital, New York City.
S. D. Hart, detached Naval Hospital, New York City.
G. R. W. French, detached Naval Hospital, Newport, R. I.
W. A. Bloedorn, detached Naval Medical School Hospital.
W. J. Riddick, detached Naval Station, Charleston, S. C.
G. E. Thomas, detached U. S. S. *Franklin*.

J. A. Bass, ordered to instruction, Naval Medical School, Washington, D. C.

Public Health and Marine-Hospital Service

List of changes for the seven days ended Sept. 22, 1909:

White, J. H., surgeon, granted 7 days, leave of absence from Sept. 18, 1909, under paragraph 189, Service Regulations.

Lavinder, C. H., P. A. surgeon, granted 3 days' leave of absence en route to station.

Goldberger, Joseph, P. A. surgeon, reassigned to duty in the Hygienic Laboratory, to date from Oct. 31, 1908.

Frost, W. H., P. A. surgeon, granted 1 day's leave of absence, Sept. 13, 1909, under paragraph 191, Service Regulations.

Warner, H. J., asst.-surgeon, granted 5 days' leave of absence from Sept. 25, 1909.

Browne, R. W., acting asst.-surgeon, granted 16 days' leave of absence from Sept. 16, 1909.

Burland, B. W., acting asst.-surgeon, granted 14 days' leave of absence from Sept. 13, 1909.

Curley, C. P., acting asst.-surgeon, granted 21 days' leave of absence from Sept. 25, 1909.

Duffy, Francis, acting asst.-surgeon, granted 3 days' leave of absence from Sept. 21, 1909.

Dynan, N. J., acting asst.-surgeon, granted 16 days' leave of absence from Sept. 13, 1909.

Light, S. D. W., acting asst.-surgeon, granted 30 days' leave of absence from Oct. 5, 1909.

Marsh, W. H., acting asst.-surgeon, granted 13 days' leave of absence from Oct. 2, 1909.

Mason, Wm. C., acting asst.-surgeon, granted 5 days' leave of absence from Oct. 4, 1909.

Robertson, Herman, acting asst.-surgeon, granted 14 days' leave of absence from Sept. 17, 1909.

Seavey, L. T., acting asst.-surgeon, granted 3 days' leave of absence from Sept. 15, 1909, under paragraph 210, Service Regulations.

Small, E. M., acting asst.-surgeon, granted 14 days' extension of annual leave on account of sickness from Aug. 30, 1909.

Thornton, M. J., acting asst.-surgeon, granted 13 days' leave of absence from Oct. 1, 1909.

Wetmore, W. O., acting asst.-surgeon, granted 1 day's extension of annual leave on account of sickness, Sept. 4, 1909.

Health Reports

The following have been reported to the Public Health and Marine-Hospital Service, during the week ended Sept. 24, 1909:

SMALLPOX—UNITED STATES

Illinois: Peoria, Aug. 1-31, 9 cases.
Indiana: Fort Wayne, Sept. 4-11, 3 cases.
Louisiana: New Orleans, Aug. 28-Sept. 4, 1 case.
Missouri: St. Louis, Sept. 4-11, 1 case.
Ohio: Dayton, Sept. 4-11, 5 cases.

SMALLPOX—INSULAR

Philippine Islands: Manila, July 24-31, 1 case.

SMALLPOX—FOREIGN

Brazil: Pernambuco, July 1-31, 27 deaths.
Chile: Valparaiso, Aug. 4-21, present.
China: Amoy, July 1-31, 9 cases, vicinity; Newchwang, July 31-Aug. 14, 2 cases, 1 death; Shanghai, July 31-Aug. 7, 1 death.
Ecuador: Ensenada, Aug. 10, epidemic; Guayaquil, July 1-31, 4 cases, 1 death, in vicinity.
France: Paris, Aug. 14-21, 1 death.
India: Calcutta, July 31-Aug. 7, 2 deaths; Rangoon, 2 deaths.
Italy: Naples, Aug. 22-29, 17 cases, 3 deaths.
Java: Batavia, July 31-Aug. 7, 1 case.
Mexico: Monterey, Aug. 29-Sept. 5, 1 death; Veracruz, 2 cases, 1 death.
Peru: Mollendo, Aug. 30, present.
Portugal: Lisbon, Aug. 21-28, 14 cases.
Russia: Moscow, Aug. 14-21, 3 cases, 2 deaths; Odessa, Aug. 7-21, 14 cases, 5 deaths; Riga, Aug. 21-28, 9 cases; St. Petersburg, Aug. 7-21, 40 cases, 11 deaths; Warsaw, July 10-17, 1 death.
Spain: Barcelona, Aug. 21-28, 6 deaths; Vigo, Aug. 14-28, present.
Turkey: Bagdad, July 17-Aug. 4, present.

YELLOW FEVER

Brazil: Manaos, July 7-14, 2 deaths; Para, Aug. 14-28, 9 cases, 9 deaths; Pernambuco, July 1-31, 2 deaths.
Ecuador: Guayaquil, Aug. 14-21, 3 deaths.
Mexico: Merida, Sept. 3-10, 2 deaths, in vicinity.
Venezuela: Maiquetia, Aug. 25, 1 case, vicinity of La Guaira.

CHOLERA—INSULAR

Philippine Islands: Manila, July 24-31, 1 case, 1 death; Provinces, July 24-Aug. 7, 278 cases, 191 deaths.

CHOLERA—FOREIGN

China: Amoy, July 31-Aug. 7, 15 deaths; Hankau, Aug. 3, present; Shanghai, Aug. 3-11, present.
India: Calcutta, July 31-Aug. 7, 7 deaths; Madras, Aug. 7-13, 1 death; Rangoon, July 31-Aug. 7, 3 deaths.
Manchuria: Dalny, Aug. 7-14, 1 case, on steamship Kobe Maru.
Netherlands: Amsterdam, Sept. 10, 1 case; Dirksland, 1 case; Middelburg, Aug. 28-Sept. 4, 1 case; Rotterdam, Aug. 20-Sept. 4, 34 cases, 14 deaths; Tholen, Aug. 28-Sept. 4, 1 case; Utrecht, 1 case; Vlaardingen, 1 case.
Russia: General, Aug. 21-28, 573 cases, 243 deaths; Moscow, Aug. 14-21, 1 case, 1 death; Riga, Aug. 21-28, 17 cases, 8 deaths; St. Petersburg, Aug. 22-29, 180 cases, 64 deaths.
Sweden: Stoekholm, Aug. 12, 1 case, imported.

PLAGUE

Chile: Iquique, Aug. 22, 4 cases, in lazaretto.
China: Amoy, July 31-Aug. 7, 51 deaths; in Vicinity, July 1-31, 19 cases, 7 deaths; Hongkong, July 24-31, 2 cases, 2 deaths.
Ecuador: Guayaquil, Aug. 14-21, 5 deaths.
Egypt: General, July 29-Aug. 5, 9 cases, 2 deaths; Alexandria, Aug. 5, 1 case.
India: General, July 31-Aug. 7, 1,287 cases, 938 deaths; Calcutta, 15 deaths; Rangoon, 29 deaths.
Japan: Kobe, Sept. 13, present.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ARIZONA: Phœnix, October 4-5. Sec., Dr. Ancil Martin.

COLORADO: Capitol, Denver, October 5. Sec., Dr. S. D. VanMeter, 1723 Tremont St.

GEORGIA: Regular, Capitol Bldg., Atlanta, October 12. Sec., Dr. E. R. Anthony, Griffin. Homeopathic: Atlanta, October 4. Sec., Dr. R. E. Hinman, 153 Whitehall St.

IDAHO: Boise, October 5-6. Sec., Dr. W. F. Howard, Pocatello.

ILLINOIS: Coliseum Annex, Chicago, October 20-22. Sec., Dr. J. A. Egan, Springfield.

KANSAS: Topeka, October 12. Sec., Dr. F. P. Hatfield, Olathe.

MICHIGAN: Lansing, October 12-14. Sec., Dr. B. D. Harison, 504 Washington Arcade, Detroit.

MINNESOTA: State University, October 5. Sec., Dr. W. S. Fullerton, 214 American National Bank Bldg., St. Paul.

MISSISSIPPI: Jackson, October 12. Sec., Dr. S. H. McLean.

MONTANA: Capitol, Helena, October 5. Sec., Dr. W. C. Riddell.

NEW JERSEY: State House, Trenton, October 19-20. Sec., Dr. E. L. B. Godfrey, Camden.

NEW MEXICO: Santa Fe, October 11-12. Sec., Dr. J. A. Massie.

NORTH DAKOTA: Grand Forks, Oct. 5-7. Sec., Dr. H. M. Wheeler.

OKLAHOMA: Ione Hotel, Guthrie, October 13. Sec., Dr. Frank P. Davis, Enid.

RHODE ISLAND: Room 313, State House, Providence, October 7-8. Sec., Dr. Gardner T. Swarts.

UTAH: Room 207, City and County Bldg., Salt Lake City, October 4-5. Sec., Dr. G. F. Harding, 310 Templeton Bldg.

WYOMING: Laramie, October 20-22. Sec., Dr. S. B. Miller.

A Standard Medical Curriculum

At the Fifth Annual Conference of the Council on Medical Education, held in Chicago, April 5, 1909, a standard medical curriculum was recommended, the report of which is published in the *American Medical Association Bulletin*, September, 1909.[1] This supplies a long-felt need. Without a standard

1. A copy of the Bulletin will be sent on receipt of four cents for postage.

curriculum as a guide there would be danger that, instead of securing a fairly uniform curriculum, some colleges might lay too much stress on some subjects and too little on others, or might overload the curriculum with unimportant subjects and details. It was essential to arrange a medical curriculum which would not be so overcrowded as to prevent the best work but which would furnish the best training and equipment for practitioners in medicine. The domain of medical knowledge has become so extensive that it was quite necessary to point out what subjects should be required, how much emphasis should be laid on each and what subjects should be made elective.

In order to prepare this standard curriculum, the Council on Medical Education selected a Committee of One Hundred from the leading medical educators of the United States and Canada to make an exhaustive study of the problem. The subjects of the medical curriculum were arranged in ten groups and a subcommittee of ten members was selected for each group. Before active work was begun an outline was prepared giving the main propositions on which the curriculum was to be constructed. These propositions were: 1. The entire medical course was to cover four years of *at least* thirty weeks each, exclusive of holidays, consisting of thirty hours per week of actual work. 2. A four-year high-school education and in addition at least one year of college work devoted to courses in physics, chemistry, biology and modern languages was to be required for admission. 3. The total requirement in all branches of the medical curriculum for the four years was to be *at least* 3,600 hours. (The 4,100 hours of the curriculum recommended represents, therefore, the *maximum* requirement). Each member was forwarned that the chief difficulty would be the fixing of the number of hours to be devoted to each subject since the claims of all other subjects would have to be kept in mind.

In order to secure some uniformity of procedure a suggestive outline of the points to be taken up was prepared and specific recommendations were asked regarding: (a) prerequisite courses, referring either to preliminary requirements or to medical courses which should precede the subjects under consideration; (b) the place in the curriculum, whether in first, second, third or fourth year; (c) portions of the subject to be required and portions to be optional; (d) necessary qualifications of instructors; (e) the best methods of instruction; (f) the necessary laboratory equipment (apparatus), or, if a clinical branch, the minimum number of hospital or dispensary patients which should be required; (g) auxiliary facilities (library, museum, charts, stereopticons, reflectoscopes, etc.) which should be required; (h) the proportions of didactic (lectures or recitations) and practical (laboratory or clinical) teaching; (i) the minimum total of hours of a 3,600-hour curriculum to be devoted to the subject or subjects of each section. It was made clear that the outline was not intended to limit the discussions to the items mentioned but that specific recommendations relating to any other subjects or to the curriculum as a whole would be strictly in order.

It is stated by the Council on Medical Education that this standard curriculum is advanced for its educational value and not with the idea that all colleges should be required to conform strictly to it. In fact, absolute uniformity of curricula in all colleges is not desirable, although comparative uniformity will be of much benefit in permitting students more freedom to migrate from one college to another and in facilitating a larger interstate reciprocity in the licensing of physicians.

The ten divisions of the curriculum and the subcommittee assigned to each are as follows:

SECTION 1.—ANATOMY, INCLUDING HISTOLOGY AND EMBRYOLOGY

Chairman: CHARLES R. BARDEEN, M.D., Professor of Anatomy, University of Wisconsin, College of Medicine, Madison, Wis.

ALBERT C. EYCLESHYMER, Ph.D., Professor and Director of the Department of Anatomy, Histology and Embryology, St. Louis University, Grand Ave. and Carolina St., St. Louis.

IRVING HARDESTY, Ph.D., Assistant Professor of Anatomy, University of California, Medical Department, San Francisco.

G. CARL HUBER, M.D., Professor of Histology and Embryology, University of Michigan, College of Medicine, 1330 Hill St., Ann Arbor, Mich

GEORGE S. HUNTINGTON, M.D., Professor of Anatomy, Columbia University, 437 W. 59th St., New York City.

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SECTION 2—ORGANIC CHEMISTRY, PHYSIOLOGY AND PHYSIOLOGIC CHEMISTRY

Chairman: ELIAS P. LYON, Ph.D., Professor of Physiology, St. Louis University, School of Medicine, St. Louis.

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GUSTAV MANN, M.D., Professor of Physiologic Chemistry, Tulane University of Louisiana, New Orleans.

ALBERT P. MATHEWS, Ph.D., Professor of Physiologic Chemistry, University of Chicago.

SECTION 3.—PATHOLOGY AND BACTERIOLOGY

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SECTION 4.—PHARMACOLOGY, TOXICOLOGY AND THERAPEUTICS

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SECTION 5.—MEDICINE, INCLUDING PEDIATRICS AND NERVOUS AND MENTAL DISEASES

Chairman: GEORGE DOCK, M.D., Professor of Medicine, Tulane University of Louisiana, 124 Baronne St., New Orleans.

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SECTION 6.—SURGERY; GENERAL AND SPECIAL

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SECTION 7.—OBSTETRICS AND GYNECOLOGY

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SECTION 8.—DISEASES OF THE EYE, EAR, NOSE AND THROAT

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DISEASES OF THE EYE

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SECTION 10.—HYGIENE, MEDICAL JURISPRUDENCE AND MEDICAL ECONOMICS

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Besides the regular members of the subcommittees there was a number of collaborators, or corresponding members to whom credit is due for many suggestions and much valuable assistance. These are as follows:

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GEORGE C. WHIPPLE, Sanitary Engineer, New York City.

Iowa June Report

Dr. Louis A. Thomas, secretary of the Iowa State Board of Medical Examiners, reports the written examinations held at Des Moines, June 1-3 and 22-23, 1909, and at Iowa City, June 9-11, 1909. The number of subjects examined in was 8; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 99, of whom 92 passed and 7 failed. The following colleges were represented:

PASSED College	Year Grad.	Per Cent.
George Washington University	(1908)	79.5
Northwestern University Medical School	(1906)	88.7; (1907) 84; (1908) 79.2; (1909) 77.9, 83.1.
Hahnemann Medical College and Hospital	(1907)	75.4; (1908) 83.1; (1909) 84.5.
College of Physicians and Surgeons, Chicago	(1909)	84.1, 85.1, 86.4, 88.2.
Rush Medical College	(1905)	90; (1906) 90.1
Drake University	(1909)	75, 79.4, 79.7, 80, 81.5, 82.7, 83.6, 83.7, 84.9, 85.5, 86, 86.2, 87.9, 88.7, 89.4, 89.6, 89.7, 90.2.
University of Iowa, College of Medicine	(1909)	77.9, 80.6, 81, 82.1, 82.2, 82.2, 83.6, 83.7, 83.7, 84, 84.1, 84.2, 84.5, 84.5, 84.7, 84.9, 85, 85.2, 85.4, 85.4, 85.5, 85.9, 86.2, 86.4, 86.6, 86.4, 86.9, 86.9, 87, 87.1, 87.2, 87.4, 87.4, 87.7, 88, 89, 89.4, 90, 90.6, 91, 92.4, 92.6.
University of Iowa, College of Homeopathic Medicine	(1909)	86.5, 86.9, 89.5.
Sioux City College of Medicine	(1909)	75.2, 76.9
Johns Hopkins University	(1909)	81.6, 84.1
St. Louis College of Physicians and Surgeons	(1909)	76.5, 78.
Washington University, St. Louis	(1894)	76.7
University of Missouri	(1909)	82.5
University Medical College, Kansas City	(1909)	76.9
Creighton Medical College	(1909)	86.7
Ohio Medical University	(1896)	84.2
Jefferson Medical College	(1909)	90.1
Wisconsin College of Physicians and Surgeons	(1909)	80.2
Marquette University, Milwaukee	(1909)	77.4

FAILED

Chicago College of Medicine and Surgery	(1909)	69.2
Keokuk Medical College	(1900)	65.4
Keokuk Medical College, College of Physicians and Surgeons	(1901)	65.7:* (1906) 66.7.†
Drake University	(1909)	72.
University of Iowa	(1906)	67.6**
St Louis College of Physicians and Surgeons	(1909)	53.1

* Second examination. ** Third examination. † Fourth examination.

Marriages

WILLIAM EDGAR LOWER, M.D., Cleveland, Ohio, to Miss Mabell Loring Freeman of Worcester, Mass., September 14.

GIDEON HARMER PATTON, M.D., Philadelphia, to Miss Martha Emerick of Harrisburg, Pa., at Philadelphia, September 15.

CHARLES WALTER WADDELL, M.D., Fairmont, W. Va., to Miss Myrtle DeVene Shaw Hoult, of Baltimore, September 14.

GUY LUVERGNE BLISS, M.D., Three Rivers, Mich., to Miss Edith Gertrude Smith, of Oskaloosa, Iowa, September 1.

EMIL FRANCIS THOLEN, M.D., Tropico, Cal., to Miss Mary Sydney Shephard of Fort Madison, Iowa, September 15.

GEORGE STANBERRY WALKER, M.D., to Miss Mabel Robinson, both of DeLand, Ill., at Bloomington, Ill., September 15.

JAMES B. PADGHAM, M.D., Donahue, Iowa, to Miss Ida Louise Battey of West Liberty, Iowa, September 8.

FRANCIS ALBERT BRUGMAN, M.D., Minot, N. D., to Miss Mabel V. Shalla of Iowa City, Iowa, September 15.

EDWARD CARLON FERGUSON, M.D., to Miss Etta Louise Schwartz, both of Edwardsville, Ill., September 7.

WILLIAM FREDERICK ZIERATH, M.D., to Miss Lydia Clair Hoehle, both of Sheboygan, Wis., September 17.

GUSTAVUS CHARLES DOHME, M.D., Baltimore, Md., to Miss Ada Frances Chinn, at Baltimore, September 15.

E. CARLTON FOSTER, M.D., Penn Yan, N. Y., to Miss Pearl A. Wixom of Hammondsport, N. Y., September 9.

JOHN W. SNEED, M.D., Brentwood, Tenn., to Miss Margaret Williams of Nashville, Tenn., September 15.

J. BURTON RUTHERFORD, M.D., to Miss Bessie H. Shipley, both of Wilmington, Del., September 20.

WIBB EARL COOPER, M.D., U. S. Army, to Miss Pearl Herron of Nashville, Tenn., September 15.

LEWIS CARTHRAE, JR., M.D., Corder, Mo., to Miss Ella Mallonee of St. Louis, September 1.

ELIJAH C. TROUT, M.D., to Miss Vernice L. Petty, both of Birds, Ill., September 8.

Deaths

William Christopher Krauss, M.D. Bellevue Hospital Medical College, New York City, 1886; University of Berlin, Germany, 1888; of Buffalo, N. Y.; a member of the American Medical Association and American Neurological Association; a member of the board of managers of the Buffalo State Hospital; medical superintendent of the Providence Retreat for the Insane; consulting neurologist to the Buffalo General, Erie County, German Deaconess, Emergency and Woman's hospitals, and the Buffalo Eye and Ear Infirmary; one of the editors of the *Buffalo Medical Journal*; an alienist and neurologist of repute; author of a work on syringomyelia and other spinal cord tumors; and translator of Mendel's work on "Psychiatry, a Study of Insanity," died suddenly in the New York Hospital, September 21, from nervous breakdown, aged 45.

Thomas Hovey Gage, M.D. Harvard Medical School, Boston, 1852; medical director and vice-president of the State Mutual Life Assurance Company, Worcester, Mass.; an original trustee of Washburn Memorial Hospital; a trustee and treasurer of Clark University; president of the Massachusetts Medical Society from 1886 to 1888; a member of the American Antiquarian Society; in charge of the hospital ship *Knickerbocker* during the Civil War; for many years a member and president of the board of trustees of the Worcester City Hospital; died at his home, September 17, from heart disease, aged 83.

George Howell, M.D. University of Michigan, Ann Arbor, 1863; a member of the Michigan State Medical Society, and for many years a member of the American Medical Associa-

tion; from 1882 to 1886 a member of the legislature and for one term state senator; for fifteen years a member of the board of education, and one year president of the village of Tecumseh, Mich.; died at the home of his daughter in Macon township, September 14, from cerebral hemorrhage, aged 72.

James Galloway Buchanan, M.D. New York University, New York City, 1848; of Pittsburg, Pa.; local surgeon to the Pennsylvania System for 49 years; a member of the staff of the Allegheny General Hospital; surgeon of the Thirty-second and One Hundred and Twenty-fifth Ohio Volunteer Infantry throughout the Civil War; one of the oldest practitioners of western Pennsylvania; died at the home of his daughter in Pittsburg, September 14, aged 85.

John W. Coffin, M.D. Western Reserve University, Cleveland, 1889; a member of the American Medical Association; formerly of Beaver Falls, Pa.; major and surgeon of the Tenth Pennsylvania Infantry, U. S. V., during the Spanish-American War; and later in charge of the Bilibid Hospital, Manila; after his removal to Texas, captain and assistant surgeon in the Texas National Guard; died at his home in El Paso, September 16, aged 42.

George Lafayette Martin, M.D. College of Physicians and Surgeons, Baltimore, 1877; a member of the South Carolina Medical Association; for eight years supervisor of vaccination and quarantine for the Piedmont section of South Carolina under the State Board of Health; died at his home near Greenville, September 16, aged 55.

Richard S. Forsyth, M.D. Detroit (Mich.) College of Medicine, 1892; of Houston, Texas; a member of the American Medical Association; formerly local surgeon to the Northwestern System at Escanaba and physician of Delta county, Mich.; died at his summer home in La Porte, Texas, September 10, aged 42.

Joseph W. Wassall, M.D. College of Physicians and Surgeons, Chicago, 1884; of Chicago; a member of the American Medical Association; for several years dentist to the Czar of Russia; was washed from the deck of a yacht in Lake Michigan, off Racine, Wis., September 18, and drowned, aged 51.

Henry E. Thornton, M.D. Barnes Medical College, St. Louis, 1901; a member of the American Medical Association; died at his home in Maplewood, St. Louis, September 12, from the effects of carbolic acid, taken, it is believed, with suicidal intent, aged 30.

Philip G. Nichols, M.D. Missouri Medical College, St. Louis, 1872; for fifty years a practitioner of Pike county, Mo.; a clergyman of the Methodist Episcopal Church South; died at his home in Ashley, September 11, from cerebral hemorrhage, aged 69.

Benjamin L. Stovall, M.D Memphis (Tenn.) Hospital Medical College, 1884; of Lonoke, Ark.; a member of the Arkansas Medical Society; died in the Physicians and Surgeons' Hospital, Little Rock, Ark., September 14, from nephritis, aged 50.

William Benjamin Artz, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1878; for six years a member of the council of Osage City, Kan., and for four years mayor of the city, died at his home, September 12, from asthma, aged 59.

Julius B. Huber, M.D. Beaumont Hospital Medical College, St. Louis, 1896; of South St. Louis; a member of the Missouri State Medical Association; died in St. Anthony's Hospital, St. Louis, September 15, from tuberculosis, aged 49.

Alfred Meyers Fisher, M.D. Jefferson Medical College, Philadelphia, 1890; of McAlisterville, Pa.; died in Lebanon, Pa., May 22, from the effect of hydrocyanic acid, self-administered, it is believed with suicidal intent, aged 40.

Grenville Smith Stevens, M.D. College of Physicians and Surgeons, New York City, 1854; for more than half a century a practitioner of Providence, R. I.; died at his home in Edgewood, Providence, September 16, aged 80.

G. N. Harcy, M.D. University of Budapest, Hungary, 1848; surgeon in the Austro-Hungarian service, and exiled with Kossuth in 1852; died at his home in Bellevue, Ohio, September 14, from a congestive chill, aged 79.

Augustus Benjamin Southwick, M.D. Homeopathic Medical College of Pennsylvania, Philadelphia, 1867; physician to the Rome (N. Y.) City Hospital; died at his home in that city, September 11, from pneumonia, aged 69.

John Dambach, M.D. University of Buffalo (N. Y.), 1868; a member of the Medical Society of the State of New York; surgeon of volunteers during the Civil War; died at his home in Buffalo, September 15, aged 67.

Winfield Scott, M.D. Medical College of Ohio, Cincinnati, 1877; of Senecaville, Ohio; while making a professional call in Byesville, Ohio, died suddenly, September 14, from heart disease, aged 61.

John Sydenham Wilson, M.D. Kansas City (Mo.) Medical College, 1874; a member of the State Medical Association of Texas; died suddenly at his home in Houston, Texas, September 12, aged 59.

Ezra A. Palmer, M.D. University of Michigan, Ann Arbor, 1876; Northwestern University Medical School, Chicago, 1886; died at his home in Hartford, Mich., September 18, from nephritis, aged 62.

John Wheeler Pray, M.D. Harvard Medical School, Boston, 1879; a member of the New Hampshire Medical Society; died at his home in Northwood, June 19, from tuberculosis of the bowels, aged 57.

Charles Henry Springer, M.D. Wooster University, Cleveland, Ohio, 1882; of Cleveland; died in the Cleveland City Hospital, September 17, it is said, as the result of drug addiction, aged 48.

Fremont C. Warne (license, Mich., years of practice, 1900); one of the oldest practitioners of northern Michigan; died at his home in East Jordan, September 12.

William H. C. Moore, M.D. Rush Medical College, Chicago, 1867; died at his home in Essex, Iowa, September 4, from carcinoma of the stomach, aged 68.

Clarence Stephen Perry, M.D. Long Island College Hospital, Brooklyn, N. Y., 1885; died at his home in South Brooklyn, September 16, from pleurisy, aged 44.

Truman Squire Sumner, M.D. New York University, New York City, 1871; died at his home in Brooklyn, September 17, from nervous breakdown, aged 62.

Ernest E. Adelsberger, M.D. University of Maryland, Baltimore, 1902; died at his home in Baltimore, September 16, from tuberculosis, aged 30.

Daniel Young, M.D. formerly of Adolphustown, Ont., died at his home in Toronto, February 22, from edema of the lungs, aged 77.

Carl Schleifenheimer (license, Berks county, Pa.); died at his home in Reading, Pa., August 6, aged 81.

Sir Stephen Mackenzie, M.D. Aberdeen, 1875; M.R.C.S., England, 1869; F.R.C.P., London, 1879; of London, England; medical registrar and assistant physician of the London Hospital; formerly president of the Metropolitan Counties Branch and president of the section of medicine of the British Medical Association in 1897; formerly president of the Hunterian Society; lecturer on medicine and pathology in the London Hospital Medical Society; consulting physician to many London hospitals; Lettsomiam lecturer on the pathology, symptoms and treatment of anemia before the Medical Society of London in 1891; orator of the same society in 1902, when he delivered the annual oration on "The Powers of Natural Resistance, or the Personal Factor in Diseases of Microbic Origin;" an untiring research worker, whose labors on albuminuric retinitis, filariasis, sleeping sickness and anemia were especially notable; died at the home of his son in Dorking, Surrey, September 3, aged 64.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

Medical Defense Adopted in Michigan

The Michigan State Medical Society at its recent meeting in Kalamazoo adopted the plan of medical defense proposed a year ago. The by-laws of the state society were amended so as to provide for: (1) an initial assessment of $1.50 from each member of the state society for the year 1910; (2) an annual per capita assessment thereafter of $1 per year; (3) a standing committee on medical defense consisting of an executive board of five and one member from each county society. The executive board is to be elected by the council for five years. The other members of the standing committees are to be elected by the county societies for one year. The chairman of the executive board, to be elected by the council

of the state society for a term of one year, is to be the custodian of the defense fund. The executive board is authorized to retain by the year a competent firm of attorneys. Any member not in arrears is entitled to the benefits of the medical defense plan when sued or threatened with suit for civil malpractice. Dues must be paid before June 1. No member is entitled to defense in a suit the cause of which arose while the member was in arrears. Two years' liability is assumed for each member, provided suit was threatened or begun before the member joined the society or before the medical defense plan was established. Suits brought against the estate of a deceased member are also defended. All attorneys' fees and court costs are to be paid from the defense fund, but no damages assessed against any defendant will be paid. Each county society in the state is given the right to withdraw from the benefits of the medical defense plan on a majority vote of all of the members of the society.

The adoption of this feature by the Michigan State Medical Society is an extension of medical defense from the Wayne County Medical Society to the rest of the state, the plan having been first tested in Detroit. In many points the development of medical defense in Michigan is similar to that in Illinois, in which it was first taken up by the Chicago Medical Society, and later extended to the entire state. The proposed plan was submitted to the county societies and has been thoroughly and carefully discussed during the past year. Its adoption by a practically unanimous vote shows that the members of the state society were thoroughly convinced of the value of the plan. A number of objections similar to those raised in other states were made against the proposal. It is safe to say, however, that in the course of a year all of these objections will disappear in the light of practical experience and that the medical defense feature will become one of the most valued of membership privileges.

Medical Poor Relief in England

The supplement to the *British Medical Journal* for August 21 contains an address on "The Medical Aspect of the Report of the Royal Commission on Poor Law Reform" by Dr. H. Manley, President of the Birmingham branch of the British Medical Association. His discussion of medical relief of the poor is of particular interest in view of the recent consideration given the abuse of medical charities by some of our larger local organizations. Dr. Manley says: "The recent showing of the report of the Poor Law Commission has furnished me with an opportunity of discussing the grievous disabilities under which we are laboring as a profession. . . . Never has there been a moment in our professional history when there was greater need or greater opportunity for the general medical practitioners of this country to decide for themselves what is to be done for them and then to take united action to induce . . . the great departments of the state to recognize and to protect a body of its most highly trained citizens who are indispensable to its welfare and who receive a very scant return, either in cash or courtesy, for the services rendered to the public and to the government."

After discussing the lack of united action, which he considers the cause for this condition, Dr. Manley states that there are at present in England and Wales 3,713 physicians holding appointments as district medical officers, who in the past year attended 216,022 patients, in addition to those who were also in receipt of regular parish pay and to inmates of the poor law infirmaries. This relief he estimates to have cost about $2,500,000, which does not, however, represent the net income of the district medical officer, many of whom, according to the report of the Royal Commission, do not receive more than eight or twelve cents a visit. Dr. Manley also criticizes the details of administration and the character of relief afforded under the present poor law and concludes, "In plain English, a great part of this half million of money is spent in providing the poor with bottles of medicine—a dark medicine with a strong taste, preferably that of peppermint. . . . As the local medical humorist wrote, 'You just tell the medicine by the corks. If the cork is black you know it's the iron tonic; if it is stained brown with a crust on it, its the rhubarb and soda; and if it isn't any color at all it's the salts and the quassia. The pot. nit. you can tell by the taste, and the asafetida and bromid by the smell. And that's all, except the cough mixture, which smells of paregoric. It's only fools as wants prescription books.'"

Dr. Manley reviews at length the report of the Royal Commission as well as the minority report submitted by two members, and from the entire discussion draws the following conclusions: "It is abundantly evident that we are on the eve of great and sweeping changes in the administration of medical aid. The reform of the poor law . . . is inevitable. . . . Two schemes will be before the country: (1) The arrangement of all medical relief on a provident basis; (2) the establishment of a state medical service with power to the state to recover the cost from those who can afford to pay." Owing to the higher ratio existing in England between the number of physicians and the total population as compared with the United States, as well as the relatively larger number of persons coming under the operation of the poor laws in England, this question is one of great importance to the British medical profession. In both the question of contract practice and that of the administration of medical charities, we can learn much from the experiences of English physicians, and can perhaps profit by the attempts that have been and are being made in England to solve these questions equitably. The report of the Royal Commission, as well as the discussion thereon, should be read and carefully considered by those interested in similar problems in this country.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Second Month—First Weekly Meeting

DISEASES OF THE BRAIN

ANATOMY OF BRAIN

MEMBRANES OF BRAIN: (1) Dura mater—structure, attachments; (2) arachnoid—structure, subarachnoid space; (3) pia mater—structure.

PORTIONS OF BRAIN: Medulla, pons Varolii, cerebellum, midbrain, cerebrum.

VENTRICLES: Lateral, third, fourth, foramen of Majendie, aqueduct of Sylvius, communications, contents.

DISTRIBUTION OF GRAY MATTER: (1) In the bulb; (2) in the pons; (3) in the midbrain; (4) in the cerebrum; (5) in the cerebellum.

STRUCTURE OF BULB: Shape, size, surfaces, white matter, gray matter, pyramids, olives, restiform bodies, funiculi, corpora quadrigemina.

STRUCTURE OF PONS: Distribution of white and gray matter.

STRUCTURE OF MIDBRAIN: White and gray matter, aqueduct, fillet. Crus cerebri. Origin of cranial nerves.

CEREBELLUM: Vermis, hemispheres, peduncles, white and gray matter.

CEREBRUM: Hemispheres, corpus callosum, cortex, lobes, basal ganglia, corpus striatum, optic thalamus, internal capsule, corona radiata, projection fibers, association fibers, commissural fibers.

BLOOD-VESSELS: (a) To meninges; (b) to pia and brain substance. Circle of Willis and branches. Charcot's "artery of cerebral hemorrhage." Cerebral veins and sinuses.

PHYSIOLOGY OF THE BRAIN

SENSORI-MOTOR AREA: Fissure of Rolando, anterior and posterior central gyri, paracentral lobule, operculum, third frontal gyrus. Leg, arm and head regions. Hemiplegia, monospasm, Jacksonian epilepsy. Muscular sense, parietal lobes. Pressure, pain, temperature, sense.

SPEECH AREAS: Sylvian fissure, third frontal convolution, motor aphasia. First and second temporal convolutions, sensory aphasia. Visual speech area, lower parietal. Right- and left-handed persons.

SIGHT AREA: Occipital lobes, hemianopsia. Two visual centers.

SOUND AREA: First and second temporal convolutions.
PSYCHIC CENTERS: Frontal lobes. "Silent Areas."
FUNCTIONS OF CEREBELLUM: Co-ordination, psychical functions, location of function.
FUNCTIONS OF MEDULLA: Respiratory and circulatory centers.
CEREBRAL TOPOGRAPHY: Fissure of Rolando, fissure of Sylvius. Horseley's method, Kronlëin's method, Chiene's method.

Society Proceedings

COMING MEETINGS

Amer. Academy of Ophth. and Oto-Laryngology, New York, Oct. 4-6.
Amer. Association of Railway Surgeons, Chicago, October 20-22.
Assn. of Military Surgeons of U. S., Washington, D. C., October 5-8.
American Public Health Association, Richmond, Va., October 19-22.
Delaware State Medical Association, Dover, October 8.
Indiana State Medical Association, Terre Haute, October 7-8.
Kentucky State Medical Association, Louisville, October 19-21.
Minnesota State Medical Association, Winona, October 13-14.
Mississippi Valley Medical Association, St. Louis, October 12-14.
South Dakota State Medical Association, Aberdeen, October 6-8.
Vermont State Medical Assn., White River Junction, Oct. 14-15.
Virginia, Medical Society of, Roanoke, October 5-8.
West Virginia State Medical Association, Elkins, October 6-8.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS

Twenty-Second Annual Meeting, Held at Fort Wayne, Ind., Sept. 21-23, 1909

The President, DR. WILLIAM HENRY HUMISTON, Cleveland, Ohio, in the Chair.

An address of welcome was made by Dr. H. A. Bruggemann, president of the Fort Wayne Medical Society, and was responded to by Dr. James Edgar Sadler, Poughkeepsie, N. Y.

Advantage of the Combined Intraperitoneal and Extraperitoneal Urethro-Lithotomy for Removal of Stones from Lower Ureter

DR. ERNST JONAS, St. Louis: In this paper I call attention to the respective value of the various methods of examination in the diagnosis of ureteral stone and emphasize the importance of not relying on any one of these methods, but on a combination of all of them. Particularly important are repeated examinations of the urine, especially after attacks of kidney colic, and thorough physical examination with repeated vaginal and rectal examinations, good radiographs, and cystoscopic examination, with catheterization of the ureters.

The proper operation for the removal of stones from the lower ureter (brim of the pelvis down to the bladder) must not only offer the simplest technic but must permit an examination for possible etiologic factors, as adhesions around the appendix, tubes and ovaries, or retroflexion of the uterus. The above conditions may produce ureteritis, periureteritis, or increase the normal bend of the ureter to such a degree that it becomes kinked. As a result, small kidney stones may be arrested or increased in size in the ureter, or a stone may be primarily formed in the ureter and remain there *in situ*. The only operation which enables us to remove these causes for ureteral stone and thus prevent recurrence of the stone is the combined intraperitoneal and extraperitoneal ureterolithotomy. The intraperitoneal steps serve for the repair or removal of such pathologic conditions, and in addition facilitate the finding of the ureteral stone. The extraperitoneal steps serve for the removal of stone. I advocate, therefore, that the combined intraperitoneal and extraperitoneal ureterolithotomy become the typical operation for the removal of stones from the lower ureter.

DISCUSSION

DR. JOHN YOUNG BROWN, St. Louis: In my own work, and in watching the work of others, I have frequently been impressed with the fact that the appendix may be removed when macroscopically there seems to be no indication that it was at fault. The anatomic relationships of the appendix and ureter are interesting. During the last year I have been studying this by cross-section work and by injecting the appendix with bismuth, doing skiagraphic work in all cases sent to my clinic with a diagnosis of appendicitis, in which I have found stones in the ureter, but in which the appendix was not diseased. I do not know of any condition that is more difficult to differentiate than certain forms of chronic appendicitis and stones in the ureter. In the last year I have had nine cases, three of them being in physicians in whom the differential diagnosis was exceedingly difficult. In one case I found a shadow of a supposed stone in the ureter, which proved to be a concretion in the appendix. I removed the appendix, which was retrocecal. In another case a physician's brother was sent to me with a diagnosis of appendicitis. I found blood in the urine. Roentgen examination seemed to indicate stone in the ureter. I did the combined operation, and removed not only a stone from the ureter but the appendix, which was adherent to the right ureter, and I am inclined to believe that the condition around the appendix had a good deal to do with the development of the stone in the ureter.

DR. A. H. FERGUSON, Chicago: A man presented himself at the Chicago Hospital on Sept. 15, 1909, with the following history: Four years ago he had a very severe attack of kidney colic, in the left kidney. He was laid up two weeks, and since then has had several minor attacks, referable to the region of the ureter. The patient is a healthy man of 58. The radiographs showed a stone in the lower end of the left ureter, between one and two inches from the bladder. The sound and cystoscope revealed nothing of the nature of calculus in the bladder. The left ureteral orifice protruded somewhat and was a trifle redder than normal. The patient was given, besides the usual preparation for laparotomy, hexamethylenamin and methylen blue. The anesthetic was ether, given by the drop-method. A skin incision was made directly over the external ring, extending upward along the course of the inguinal canal for five inches. The aponeurosis of the external oblique muscle was opened freely, exposing the entire inguinal region, and internal oblique muscle. The internal abdominal ring was enlarged without opening the peritoneal cavity. The transversalis fascia was severed along the entire length of the incision, exposing the deep epigastric vessels which were ligated and cut. The vas deferens was taken as the guide to the ureter. It was followed by blunt dissection to the base of the bladder. The sigmoid and small bowel were pressed toward the median line by gauze sponges. To obtain sufficient room to admit the hand, the origin of the internal oblique and transversalis muscles was severed from Poupart's ligament for a distance of two inches. This afforded room to reach and explore the ureter from the pelvic brim to the base of the bladder. The stone was felt in the ureter. An effort was then made to milk it into the bladder or toward the kidney. Both these measures proved impossible. An incision was made into the ureter, parallel to its long axis, about one inch below the brim of the pelvis. A stout catgut ligature had been passed around the duct as a guy-rope. The ureter was empty. There was no staining of the tissues with methylene blue. It was thus evident that anuria existed in the left kidney. An olive, flexible, bougie was passed into the ureter and the stone located. The grating of the probe against the stone could be distinctly heard. Another attempt was made to shove the stone into the bladder, but it was unsuccessful. Then a long, curved, alligator-jawed forceps was passed into the opening in the ureter. The stone was seized in its blades and carefully extracted. The entire course of the ureter from kidney to bladder was explored and found perfectly clear. No attempt was made to suture the ureter. The loose tissues on either side of the wound were drawn together, and the same suture caught about a gauze drain, covered with rubber tissue. This drain was brought out, at the upper angle of the wound. The cord was left behind the transversalis fascia. This structure, with the transversalis and internal oblique muscles were sutured to Poupart's ligament. The lower angle of the wound was drained with a cigarette drain which passed down to the side of the bladder. The external oblique was closed with continuous catgut suture, and the skin with silkworm gut sutures. A catheter was passed into the bladder to keep it empty. The procedure varies with the side of the body. If the colicky attacks are on the right side, the appendix must be thought of, and there is an indication for opening the abdomen. If the attacks are on the left side, and the patient is a man, there is no indication for opening the abdomen because such a stone

can be removed more safely without the complication of an additional cut in the peritoneum. In women these stones can be reached through the bladder, when they are low down, depending on the size, etc.

DR. H. W. LONGYEAR, Detroit: I have seen many operations on the appendix that were not justified and were prompted by the pain in the ureter under a mistaken diagnosis. In these cases we see more or less of what we may call storms of uric acid coming from intestinal toxemia. Large quantities of uric acid are thrown out from the kidney, passed down the ureter, causing inflammation of the ureter and pain, and when the pain is on the right side the condition is apt to be mistaken for appendicitis, and the temperature arising from the toxemia simulates appendicitis still more.

DR. MILES F. PORTER, Fort Wayne, Ind.: I recall a recent case in which there was typical ureteral colic and anuria. The patient had had nephritis for years. In this case, as the subsequent post-mortem revealed, there was no calculus formation whatever. Moreover, the case illustrated the value of the skiagraph. The skiagram in this case showed no ureteral calculus.

DR. C. C. FREDERICK, Buffalo: There is no question but what there are many cases of pain in the right ureter for which the appendix in the past has been blamed and removed. I have seen a number of cases of this kind in my own practice as well as in that of others, and I have been forced during the last three or four years to a realization of the fact that pain on the right side on pressure deep down over McBurney's point does not always mean that a patient has chronic appendicitis, and I believe that in many instances the trouble is in the ureter.

DR. M. I. ROSENTHAL, Fort Wayne, Ind.: Four or five years ago I reported a case of ureteral stone, complicating appendicitis. This was the only case I had then seen of ureteral calculus complicating appendicitis. Since then I have been careful to investigate the right ureter in operations for appendicitis, but I have not seen another such case. This would indicate that this complication is not frequent, although it does occur.

DR. HUGO O. PANTZER, Indianapolis: In operating on a case of gangrenous cholecystitis, with a discharge of the contents of the gall-bladder into the peritoneal cavity, I was led to examine lower down and found that at the bifurcation of the abdominal aorta a number of stones which were hard and fixed to the feel. I removed one of these stones and found it to be a calcareous degeneration of tuberculous glands. The history of the case would seem to show that this woman, 50 years of age, had in early life a tuberculosis of this part.

DR. JOHN W. KEEFE, Providence, R. I.: In one case I introduced a wax-tipped catheter and found markings on the wax. The catheter was introduced in the pelvis of the kidney, and on the day the patient was to be operated on I again passed the wax-tipped catheter to the kidney, made my incision in the loin, and found the catheter in contact with a stone in the kidney, showing that the first markings on the wax were correct.

DR. K. I. SANES, Pittsburg, cited a case illustrating the difficulty of making a differential diagnosis between ureteral trouble and appendicitis, saying that this difficulty is not only encountered in chronic but in acute cases of appendicitis.

(To be continued)

MICHIGAN STATE MEDICAL SOCIETY

Forty-Fourth Annual Meeting, held at Kalamazoo, Sept. 15-16, 1909

(Continued from page 1048)

Syphilis of the Liver—Unusual Types

DR. A. R. EDWARDS, Chicago: Syphilis of the liver is not fully appreciated either in practice or in the literature. Syphilis of the liver typically includes gummata and syphilitic cirrhosis. Aside from the close resemblance to cancer frequently presented by large and multiple gummata, cancer is frequently simulated by hepatic syphilis when gummata in the liver are attended by pain, ascites, icterus and emaciation. Alimentary symptoms are common in hepatic syphilis. A luetic cachexia may make differentiation impossible except by the therapeutic test, etc. In a second group of cases, gummata may exactly mimic abscess of the liver; deception is most likely when gummata cause fever, chills, hepatic tenderness, pain and enlargement; leucocytosis, emaciation and even fluctuation may be observed also. In a third series, local hepatic symptoms are lacking and the rigors, fever, sweats, etc., may simulate malaria, typhoid, tuberculosis, or septicopyemia; the course may cover weeks or months. In a fourth group, gall-stones, cholecystitis or calculous obstruction of the common duct are suggested until the specific remedies or operation disclose the error. In the fifth group the symptoms are almost identical with those of alcoholic cirrhosis; even in far-advanced cases recovery may ensue under mercury and iodids. The sixth type is syphilitic pylephlebitis, of which an exceptional instance was reported; the course covered over four months and was first diagnosticated septic pylephlebitis. There was sudden pain over the portal vein with a precipitate and extreme ascites, great variations in temperature which frequently rose and fell six or eight degrees in a day, severe rigors, and profound anemia and emaciation. Rather late, syphilis was considered and recovery was immediate.

DISCUSSION

DR. W. F. BREAKEY, Ann Arbor, Mich.: In acquired syphilis particularly, and that in early life the activity of this large gland must account in a large degree for the liver being the seat by preference of all the attacks of syphilis on the abdominal viscera. In all cases a thorough investigation should be made to determine the diagnosis. Many patients consult a physician with an obscure history or none at all; and even when a patient does not intend to deceive there may be abundant reason for suspecting syphilis. The period of latency is usually uncertain, and it may cover a considerable number of years, and while the physician may prescribe treatment as an aid to diagnosis, yet he is entirely justifiable in so doing when other measures have been followed and no clew results. If with the modern tests for syphilis the *Spirochæta pallida* is found, the way is clear, and there is no hesitation as to what to do. If the spirochetes are not found, and they often are not, and a longer period elapses during which the disease is suspected, in the absence of clear and definite physical signs by which we may determine carcinoma or nodular conditions of the liver, it is right, in my opinion, to try antisyphilitic treatment. Our function as physicians is to treat this disease and to lessen it, if it is not possible for us to stamp it out. I do not see why it is not just as feasible to try to stamp out syphilis as tuberculosis. There is need for higher requirements by teaching bodies and examining boards on the subject of syphilis. We should encourage the study of this disease, and one essential thing is to disabuse the public mind of the disgrace of it, because so many patients who have the disease have acquired it innocently.

DR. ANDREW P. BIDDLE, Detroit: I wish to refer specifically to gummatous lesions, and would emphasize the point that time has no limits in the formation of gumma. While it is usually taught that gumma is a late-appearing lesion, yet we know that a patient may have gumma in certain forms of destructive syphilis as early as the first few months. Another point is the relationship of syphilis to other obscure conditions. When we consider that the influence of syphilis is particularly on the blood-vessels and on the nervous system, we can easily see why there is such a variety of manifestations. We know how difficult it is, even when we see cancer on the face, to differentiate it from some of the lesions of syphilis, and it is no wonder that it is difficult sometimes to differentiate these lesions when they involve the internal organs. It is difficult with all the manifestations present to differentiate between cancer of the liver or simple gummatous formation of the liver.

DR. J. COLLINS JOHNSTON, Grand Rapids: As an illustration of the good results of what we may call the diagnostic use of syphilitic treatment in doubtful cases of the kind referred to by Dr. Edwards, I want to report briefly an interesting case in my own experience. A year-and-a-half ago I was called to see a man in a little

town near Grand Rapids who had been ill for several months, the prominent symptoms being those of alcoholic cirrhosis of the liver. He had been in the hospital two or three weeks and had been seen by several physicians, all of whom diagnosed either cancer of the liver or alcoholic cirrhosis. He went to Ann Arbor and was sent home to die of alcoholic cirrhosis of the liver. I do not know what prompted me to think the case might be syphilitic. It was decided by the attending physician and myself that the man had no hope if the diagnosis already made was correct. He had been in bed several weeks. He had been tapped a number of times, large quantities of liquid being removed from the abdomen. We put him on hypodermics of mercury and iodids internally. Under this treatment he improved rapidly, and two or three months later appeared in my office. I have seen him several times during the last year and apparently he is absolutely well, but his liver still remains large. I would like to ask Dr. Edwards if in a case of hypertrophic cirrhosis or syphilitic cirrhosis the liver ever returns to its normal size.

DR. FRANK SMITHIES, Ann Arbor: Three cases have come under my notice recently, all of which gave the hemolytic test by the original Wassermann procedure. One case particularly had been diagnosed as pernicious anemia, on account of anemia and symptoms of cachexia; it had also been diagnosed as carcinoma. The patient vomited constantly, lost 60 pounds, and altogether was in a bad way. The Wassermann test revealed the absence of hemolysis. The patient, after having vigorous lavage, promptly stopped vomiting, and was put on combined treatment. I saw him recently and he has gained within two pounds of his gross weight, and feels well in every way. A patient seen last year had an epigastric tumor, but there were no marked gastric symptoms. The patient insisted on being operated on: a portion of the tumor was removed and was found to be a gumma of the liver. A third case showed a roundish tumor in the epigastrium, which appeared to be beyond the stomach. The stomach could be inflated and did not move the tumor, which did not have any relation to the large bowel. It had no relation apparently to the liver, yet on opening the abdomen it was found to be a large gumma that had a deep connection with the liver; it cleared up to a certain degree under the combined treatment. All these patients gave the Wassermann reaction by the original procedure. The first patient has not given such a prompt reaction since the beginning of the combined treatment.

DR. MORTON, Battle Creek: I would emphasize the fact that there is such a thing as luetic fever. In the last three or four years I have had three cases that puzzled me a great deal. These patients had been treated for tuberculosis. One of them had been kept on the usual dietetic and fresh air treatment for nearly three months, and kept a regular temperature chart. He came under my care, and I could find nothing the matter with his lungs. I could not find any evidence of trouble in the respiratory tract. The man gave a history of having had syphilis seventeen years previously. I observed him for a few days, during which time the temperature ranged from 102 to 104 F. every afternoon, and in the morning it ranged from 99 to 100 F. I had read Janeway's article on luetic fever, and had also seen cases reported, and I tried the iodid treatment. In two days his temperature was normal, and two days later he had no further trouble. The other two patients behaved in the same way. It should be impressed on the minds of practitioners, therefore, that there is such a thing as luetic fever. In the cases mentioned, there was no enlargement of the liver, and I could find no abnormal condition of any of the organs of the body.

DR. W. M. DONALD, Detroit: Is it not a fact, borne out by autopsies, that hepatic syphilis in prenatal or postnatal life is of the interstitial type? Is it not a fact that hepatic syphilis in later life is almost entirely gummatous?

DR. ARTHUR R. EDWARDS, Chicago: It is true that interstitial hepatitis is more frequent in the hereditary than in the acquired type of syphilis; and the converse is true, although either form may be observed in either type of syphilis. As a rule, the liver remains larger afterward, although in some instances there is apparent recovery. In other instances the liver becomes smaller than normal. With regard to cases resembling pulmonary tuberculosis, the type described by Janeway, and suggesting tuberculosis in the absence of any visceral findings, one cannot say in such instances that temperature of that variety is always due to syphilis of the liver. It may be due to syphilis of the bones, or to syphilis of any of the viscera. I think that the hypodermic method of treating these patients gives more rapid results than any other method of administering the mercury, although it is sometimes painful and some patients will not tolerate it.

Aneurism of the Descending Thoracic Aorta

DR. JOHANN FLINTERMAN, Detroit: This condition is rare. In aneurism of the descending aorta, which often escapes detection, the earliest symptom is pain, and the patient complains of it before there is a single other physical sign or indication of the presence of a tumor. One patient, a man of 43, had an aneurism of the descending aorta. He suffered for a long time with severe pain only, and after it, about a year and a half later, from cough, dyspnea, then stridor, expectoration of blood, and paresis of the left recurrent nerve. Syphilis and lead poisoning were suspected. The diagnosis of aneurism is easy in many cases, but in others extremely difficult, often impossible. Auscultation, the condition of the heart and arteries, symptoms due to intrathoracic pressure, and most of all, the Roentgen rays, are the means of helping in the diagnosis.

DISCUSSION

DR. A. S. WARTHIN, Ann Arbor: Syphilis plays the chief, if not the entire part in the etiology of aortic aneurism. The Wassermann reaction, and more recent studies of the lesions confirm the old pathologic view that these aneurisms are syphilitic in origin.

DR. HUGO A. FREUND, Detroit: It was my good fortune to witness the post-mortem examination on the case reported by Dr. Flinterman. It was an unusual aneurism, in that its dilatations were saccular from the main fusiform dilatation. There were three separate ones which went out in different directions, one going upward and backward, adherent to the long, and posterior surface of the ribs, as well as posterior part of the chest. The other dilatation went distinctly outward and to the left. The one from which rupture took place was over the surface of the left bronchus. The left lung was filled with blood, and was absolutely airless. There was considerable fluid in the left pleural cavity. The effusion was old and had been brought about by some process of irritation. There was nothing else in the lung. Even with the *x*-ray it was impossible to make a diagnosis of this aneurism, yet the post-mortem revealed an unusual specimen.

DR. J. COLLINS JOHNSTON, Grand Rapids: I wish to report a case illustrating the value of the *x*-ray in the diagnosis of aneurism. Several years ago a man came to me who had great pain in the side of the neck, which had continued for two years. For three months he had a slight swelling at the junction of the strenum, and left clavicle and soreness on pressure. This swelling was of the hardness of stone, and was circumscribed. Percussion did not show any dulness to the right of the sternum, and for about an inch to the left, extending down to the second interspace, there is a point of interest in connection with what the *x*-ray picture showed. There were no physical signs of aneurism other than that. At my first examination I thought it might be syphilitic, tuberculous, or some osteomyelitic disease, due to some other cause. There was no difference in the radials, no signs of pressure on the bronchus or esophagus. The heart was normal and in its location. The sounds at the apex and base were normal. There was no accentuation of the second sound. I sent the patient to an *x*-ray man and he got a beautiful picture of aneurism of the ascending aorta. The picture showed that the aneurism extended a good deal farther to the left of the sternum than to the right. The tumor was a little larger than a dollar, and only a small part of the aneurism presented to the front. The man is now taking large doses of iodid of potassium.

DR. A. R. EDWARDS, Chicago: I believe that practically all aneurisms are syphilitic, and this is borne out positively both pathologically and clinically.

(To be continued)

INTERNATIONAL CONFERENCE ON LEPROSY

(Held in Bergen, Norway, Aug. 16-19, 1909)

(Continued from page 1046)

Transmission of Leprosy

DR. DEHIO, of Dorpat, Russia, maintained very emphatically the contagiousness of leprosy. Ehlers, of Copenhagen, referred to his experiments with parasitory human in sects which have been considered capable of spreading this disease, especially pulex and cimex lectularius, but he was not able to come to any determined conclusion. Dr. Sand of Trondhjem, Norway, in his thirty-five years' experience in the leprosarium of that city, having treated 1,558 lepers, has come to the conclusion that leprosy is not transmitted by immediate contact.

DR. V. DÜHRING, Dresden, discussed hereditary transmission of leprosy. He has found that the disease affects the descendants so far as to deteriorate the race. The offspring of lepers are more subject to mortality, and, moreover, they show a disposition to acquire with infectious diseases, as tuberculosis. The transmission of leprosy from parents to children biologically and clinically is in no way probable. The direct transmission of leprosy to the fetus *in utero*, although theoretically possible, has never been proved.

Psychoses of Lepers

DR. MOREINA, of Rio de Janeiro, called attention to the psychoses of the lepers. He believes that in lepers there is no peculiar kind of insanity. Only the polyneuritic leprosy can be accompanied by the whole syndrome of Korsakow. At the onset of the disease not often can be found any kind of mental alienations. In many cases complications of leprosy, as tuberculosis, streptococcus infections, or arteriosclerosis may be cause of mental trouble in the lepers. The ordinary mental condition of the patients affected with leprosy is different and is greatly influenced by the duration of the disease, by the age, by education and the clinical forms of the disease.

Mental Disturbances in Leprosy

PROFESSOR DE BEURMANN, Paris, discussed the mental troubles in leprosy and the psychism of the lepers. He called attention to the mental condition of the lepers in the extreme East, which is far different from that of the Europeans. The Hindoos, the Malays and the Mongolians, although blind, mutilated and in the most terrible general condition, never show signs of mental trouble. In Asiatic asylums have been found lepers jovial and satisfied with their condition. In consequence, the sadness and the despondency of the European lepers is more due to their education and to the consciousness of having a disease of hopeless prognosis.

Treatment

The meeting on Wednesday, August 18, was devoted entirely to therapy. Dr. von Deycke, of Hamburg, discussed nastin injections. Nastin is obtained as a neutral grease from the culture of a kind of streptothrix and it seems to be identical with the neutral fat obtained from the tubercle bacillus. This so-called streptothrix has been called *streptothrix leproides*, but has no other relation to the true leprosy bacillus than to contain a kind of nastin fat. The pure nastin has the ability to produce in some of the lepers more or less reaction of general or of local nature. The reaction is subject to the greatest oscillation. While some patients are absolutely refractory to its action, others show symptoms of so severe a nature as to jeopardize life. For these reasons nastin alone cannot be used in the treatment of leprosy. When nastin is mixed with such substances which *in vitro* remove the grease from acid-fast bacilli, like tubercle bacilli, then we obtain a preparation, which can be used as therapeutic means. One preparation is nastin-B., which is nastin combined with benzoyl chlorid in an oily solution. According to the degree of concentration, nastin-B. does not usually produce a very intense reaction, and can be obtained in a form which will not cause any reaction at all. Although nastin-B. is therapeutically much more sure and constant in its action than pure nastin, yet in individual cases it shows different action. Nastin-B. acts directly on the specific cause of leprosy in the sense of bacteriolysis, as it prepares the bacilli, by removing their fat, to be susceptible to bacteriolysis. In a large percentage of lepers treated with nastin-B. improvement has followed in the general feeling. Moreover, it seems that it has prevented the farther progress of the leprous process. The nastin treatment has to be continued for one year, in form of an intermittent therapy just as it is used in syphilis.

Treatment of Ophthalmic Diseases in Lepers

DR. LYDER BARTHEN, Trondhjem, Norway, spoke first on treatment of non-leprous diseases in leprous eyes, then on the genuine leprous diseases of the eyes, finally the last stages of the leprous eye diseases and their treatment.

Nastin Treatment in Russia

DR. E. KIWULL, Wenden, Livonia, Russia, spoke on his experience with nastin treatment in the leprosarium of Wenden. He had used only nastin-B. The injections although painful were well-borne. After the injection only an increase in the temperature occurred. In the symptoms during the treatment some better and some worse could be found. Frequently ulceration occurred of old infiltrations in tubercules and in scars. In several cases swelling and pains occurred in the ulnar nerve and its ramifications. It was often remarked that hard tubercles imbedded in the depth of the skin disappeared under its action leaving only a slight pigmentation. Ulcerations of the hard palate become much more flat and showed a tendency to heal up. Examination of the blood showed that nastin increased the number of leucocytes.

Nastin Treatment in Australia

DR. J. ASHBURTON THOMPSON, Sidney, is greatly opposed to the use of nastin. He employed the injections in 5 selected cases: 4 of tuberculous leprosy and 1 of pure leprosy of the nerves. He continued the treatment for from 6 to 9 months. In 3 of the patients the disease remained as it was. In the nervous case, the pains increased. A child became much worse. He claims that nastin is an inert substance with some irritant and also caustic effects on the seat of injection. In none of the patients did the injection produce any local reaction, or any fever.

Treatment of Leprosy

DR. H. P. LIE, Bergen, Norway, maintained that the nastin treatment is in no way a specific treatment, and the reactive symptoms produced by the injections of nastin in the lepers is nothing but a reaction which follows the injection of any fatty substance from acid-fast bacilli. The same action is found in patients affected with tuberculosis. It is necessary to be very careful with nastin, which in patients with a tendency to tuberculosis shows a detrimental action. He considers the nastin treatment, however, as a step forward toward the betterment of this disease. He spoke of good results obtained with the method of Unna, and also from other treatments, but at the end showed a patient who for 12 years had suffered severe symptoms of leprosy and for the last eight years has shown no symptoms whatever. The patient can be considered practically well, and yet the treatment was entirely expectant.

Present Knowledge of the Lepra Bacillus

DR. J. M. H. MACLEOD, London, England: The researches of the last 12 years have more firmly established the lepra bacillus of Hansen as the specific cause of this disease. By special staining methods, it is possible to distinguish the young, old and dead bacilli and the contained fat. By these methods it has been shown that the majority of the bacilli found in the tissues are dead. The finding of a cladothrix arrangement and branching forms like actinomyces, suggest that the lepra bacilli belong to the class of the streptotrix. No medium has so far been found on which lepra bacilli can be cultivated, nor is there any proof that the bacilli can live

as saprophytes on decayed organic matter, decayed fish, etc. No lower animals have been found susceptible to leprosy. The presence of bacilli in gnats and bed-bugs suspected of disseminating the disease is still doubtful. The way of entrance of the bacilli into the organism is still obscure; it may be by the nasal mucosa and the upper respiratory tract, or the infection may be from the alimentary tract, or through the genitals; perhaps through the skin.

So far there is no clear idea concerning the relation of maculo-anesthetic and nodular leprosy. May it be due to the quantity of bacilli which cause nodular leprosy, due probably to racial peculiarity, climatic condition and absence of hereditary or acquired immunity. It may also be due to a qualitative difference in the virulence of the bacilli. The pathologic lesions produced in the tissues by the direct or indirect action of the bacilli are the production of the infective granuloma. In the beginning, the bacilli are outside of the cells, but later many gain entrance and multiply therein. Obscurity still surrounds the cells which may be connective-tissue cells or plasma cells containing bacilli, or may be clusters of bacilli around a nucleus or a lymphocyte, or may be masses of bacilli accumulated in lympatic spaces. In skin lesions, the bacilli are found in the corium, but may be present in the epidermis and in the surface of the skin. Not yet clear is the manner in which the bacilli reach the surface, it is possible that they pass through the interepithelial lymphatics, or by the sweat or through the epithelial cells, and from without being deposited by the nasal discharge or by the sputum. Not much has been added to the knowledge of visceral leprosy. In the spleen true leprous infiltration occurs, and also in the lungs, where caseation and necrosis are often found. Bacilli have been found in the glomeruli of the kidneys, in the epithelium of the uriniferous canals, but not in the urine. The genitals, ovaries and testicles have been found extensively affected with leprosy, but yet the bacilli have never been found in the Graffian follicles, in the seminiferous tubules, or in the semen. Bacilli have been found in the blood, but as it has been taken from the lepromata it may be that bacilli were taken from the lymph. The blood shows all characteristics of anemia with a slight eosinophilia.

Leprosy of the eye is a late manifestation of nodular leprosy, only rarely primary. It is possible that the infection takes place in consequence of the general infection as the chorioid is the chief site of the disease and the cornea is involved after the deeper parts. It is also possible that the infection takes place from without, the conjunction being infected first, then the cornea, corneosclerotic limbus, ciliary body and finally the uveal tract. Diversity of opinion is found in reference to the pathogenesis of maculo-anesthetic leprosy. It has not yet been decided whether the maculo-anesthetic lesions are identical with those of the nodules, and have to be considered as an early stage of the skin lesion, or whether they are to be considered as a form of inflammatory process of the type of erythema persistans. Peripheral nerves may be affected in all forms of leprosy, but more markedly in the maculo-anesthetic type. The presence of the bacilli and of their toxins leads to neuritis and interstitial proliferative alterations, which by pressure on the vital nerve tissue cause degeneration of the axis cylinder. It seems that the neuritis so produced causes eventual destruction of the bacilli and consequently leprosy of the nerves is self-curative. It is doubtful if the spinal cord and the ganglia are affected by the bacilli, and it is also possible that the changes which take place in the posterior columns of the cord are not due to the bacillus *in situ*. These changes are not characteristic, and resemble the changes following the ascending degeneration of a peripheral nerve from injury or as the results of general cachexia. The possibility of the association of leprosy with other diseases as tuberculosis, syphilis, etc., must not be forgotten, and the ravages of these associated diseases must not be attributed to leprosy.

Blood Reactions in Lepers

DR. BABES, Bucharest, spoke on the reactions of the blood in the lepers: it seems that there is nothing specific to give much light on the subject.

DR. GEORGE MEYER, Berlin, maintained that the lepra serum gives the same reaction as the serum in syphilis, only in cases of the tuberculous type.

Bone and Joint Changes in Leprosy

PROFESSOR HARBITZ, Christiania, Norway, spoke on the leprous alteration of the bones and joints from trophoneurotic causes. The hands and the feet, especially at the tarsal and carpal joints, often show joint affections, which greatly resemble arthritis deformans, followed at times by a true atrophy of the bones. These conditions have to be referred to leprous neuritis.

Presentation of Pathologic Specimens

Interesting demonstrations were given at the closing of the session. Specimens of the bacilli of leprosy in the tissues were exhibited from the laboratory of Unna, at Hamburg. Dr. Arning exhibited several specimens of leprous pathologic alteration in the nerves. It seems that the Gram method with diluted stain and continued for from 24 to 48 hours has given the best results in finding the bacilli. Dr. Goodhue, of Hawaii, exhibited lantern slides showing the pathologic alterations of the bones in leprosy.

Prophylaxis of Leprosy

DR. HOLMBAE, Christiania, Norway, spoke on the fight against leprosy in a general way.

DR. WISE, Washington, D. C., directed attention to the fact that in the countries where leprosy has disappeared or has greatly diminished there has been an elevation of the standard of living among the masses of the people. He emphasized the necessity of segregation of the lepers and strict laws forbidding immigration of leprous subjects, in order to prevent the establishment of new foci of the disease.

The following resolutions were proposed and, with the exception of No. 5, were unanimously adopted:

1. The Second International Scientific Conference on Leprosy confirms in every respect the resolutions adopted by the First International Conference, at Berlin, in 1897. Leprosy is a disease which is contagious from person to person, whatever may be the method by which this contagion is effected. Every country, in whatever latitude it is situated, is within the range of possible infection by leprosy, and may, therefore, usefully undertake measures to protect itself.
2. In view of the success obtained in Germany, Iceland, Norway and Sweden, it is desirable that these countries should isolate lepers, placing them under such conditions of life as can be voluntarily accepted by them.
3. It is desirable that the children of lepers should be separated from their parents as soon as possible, and that they should remain under observation.
4. An examination should be made from time to time of those having lived with lepers by a physician having special knowledge.
5. All theories on the etiology and the mode of propagation of leprosy should be carefully examined to ascertain if they accord with our knowledge of the nature and the biology of the bacillus of leprosy. It is desirable that the question of transmissibility of leprosy by blood-sucking insects, bugs, fleas, etc., should be elucidated and that the possibility of leproid disease among animals (rats) should receive early study.
6. The clinical study of leprosy induces the belief that it is not incurable. We do not at present possess a certain cure. It is desirable, therefore, to continue the search for a specific remedy with the greatest zeal.

The Next Conference

PROFESSOR KOBLER, in the name of the Austrian Government, invited the conference to meet in Bosnia. The invitation was accepted, but the place was not decided. It has been left to the international committee to decide the time of the conference, which they must call three years before. In the same way the place has to be left to the choice of the same committee.

Hospitals for Lepers

It is of interest to report briefly visits to the leprosy hospitals.

In Bergen at present are two lepers' hospitals, both only for the nursing and for isolation of the lepers. Leprosy was formerly very wide-spread in Norway. This was only understood after the investigations of Dr. Danielssen in the forties. One hospital taken into use in 1857, was built and maintained by the state. In 1861 the state opened two new hospitals, one in Molde and one in Trondhjem. All expenses of nursing were paid by the state, and as most of the lepers are poor, the hospitals were soon filled; in 1860 and subsequent years between 700 and 800 lepers were housed in these hospitals.

The results of these measures were very beneficial and while in 1865 there were 2,870 lepers in Norway, there are now only about 400.

There is no more need for so many hospitals, therefore, the one at Molde has been converted into a tuberculosis hospital. In St. Joergen's hospital in Bergen there are at present 29 patients; no new patients are admitted, so that when those now living there die, the hospital will be abolished. St. Joergen's had its own property, acquired in earlier ages by the levying of a tax on every farm in the province of N. Bergenhus.

In the other hospital at Bergen are housed at present 84 patients. They are visited daily by Dr. Lie and Dr. Rückner, who give them the most scientific and the most charitable treatment. There are usually four patients in each room. The rooms are spacious and well aired. All forms of the disease can be seen. Most of the patients have suffered contraction of the fingers with that resulting characteristic deformity of the hand. Many have their fingers, hands and feet badly mutilated. In many cases lesions of the feet, knees, and nose, have caused extended and deep ulcerations, which are daily washed with boracic-acid solution and dressed with iodoform gauze. In many patients the eyes have been destroyed; and in a great many the nose has been entirely destroyed. In some the mouth has been reduced to a small deformed hole, which scarcely permits the introduction of food. In many cases the tongue showed lepra tubercles, mostly at its edges. Nearly every patient has leucoderma of the arms and of the legs in form of deep whitish spots, surrounded by deeply pigmented edges.

In one case of lepra tuberosa in a man, the face was so full of tubercles that his features had entirely disappeared. In a woman with a form of lepra maculosa, deeply red erythematous spots covered the neck, chest, shoulders, arms and legs. The spots were somewhat raised at the edges, brilliant, glossy and somewhat hard. Some of her fingers were somewhat swollen, but the hands were not yet contracted. Many patients were suffering with muscular and arthritic pains, and neuralgic pains.

In the men's department there is a large room where the patients work as cabinet makers. In the women's department those who can work are spinning, knitting, etc. In this way the patients may earn a little money, which they are allowed to keep.

It might be thought that the articles manufactured in the hospital would have been of danger to other people, but during all the years the hospital has existed and the people in town have bought articles made there, not a single instance is known of leprosy having spread from the hospital, not even in the years when it was not thought that the disease was infectious and, therefore, no cleansing of the articles made in the hospital was done, as it is practised at present. No one is allowed in the hospital except medical men.

Conditions in the United States

It may be of some interest to refer to conditions in the United States. The statistical dates are taken from Dr. H. P. Lie's paper. The official statistics of the commission of United States Public Health and Marine-Hospital Service gave the number of lepers in 1902 as 278, 145 of which were born in the United States. Foreign born individuals affected with leprosy in the United States are represented as follows:

Norwegians	22	From the Antilles	4
Icelanders	11	Mexicans	3
Swedish	8	Irish	6
Chinese	20	English	3
Japanese	1	French	3
Germans	12	Italians	4
Bohemians	12	Spaniards	1
Cubans	6	Australians	3

Of this number only 72 lepers are segregated. The forms of leprosy in the United States can be divided as follows: Anesthetic, 107; tuberculous, 88; mixed, 56. In California, San Francisco has 18 cases of leprosy. Of the 24 cases reported in this state, 11 patients are Chinese, but 7 of them have acquired the disease in the United States. The 11 Icelanders are settled in North Dakota and it seems that all contracted the disease in Iceland. Minnesota is the preferred state for the Scandinavians, of which 4 from Sweden and 16 from Norway affected with leprosy have established their home. Armauer Hansen in 1900 remarked that 287 lepers had left Norway and that 170 had emigrated to the United States. But only in 30 had the disease showed manifest signs before they left their native country. Bracken has found in Minnesota, 5 Swedes and 6 Norwegians affected with the leprosy. He believes that in the United States there are 160 lepers of Scandinavian origin scattered in Minnesota, Wisconsin, Iowa and South and North Dakota.

Twenty-four lepers are reported to be in Florida, of which 12 are Bohemians, 6 are Cubans and 5 are Americans.

Isadore Dyer, who is so interestingly connected with the history of this disease in the United States, maintains that leprosy was introduced in Louisiana from the Antilles about 1776. The leprosarium of Indian Camp has received since 1894, 80 lepers, of which 38 are still living, 37 are dead and 5 ran away from the asylum.

Morrow in 1899 and James N. Hyde in 1894, have tried to determine the number of lepers in the United States. It can be stated that lepers in the States of the Union can be at present considered as 278. The danger is mostly in the immigration.

The disease is too horrible for the government to wait before taking any prophylactic step. The disease is obscure and treacherous, and the lepers try to conceal it. Physicians who have had no special training in this disease are frequently unable to recognize leprosy. Leprosy must be considered contagious and as such reported to the health officer of the state. The reported leper should be examined by a specialist, and when the disease is definitely diagnosed should be segregated in a government colony.

MEDICAL SOCIETY OF THE MISSOURI VALLEY

Twenty-second Annual Meeting, held at Council Bluffs, Iowa, Sept. 9-10, 1909

(Concluded from page 1049)

Unrecognized Gall-Stone Disease

DR. DANIEL MORTON, St. Joseph, Mo.: In this paper I discuss neuralgia of the stomach, biliousness, autointoxication, nervous symptoms, pain in the gall-bladder, referred pain, vomiting, colic, tumor, jaundice, gall-stones and cancer of the gall-bladder. Let us not be deceived with the belief that gall-stones represent the final stage of gall-stone disease. It is now conceded and statistics prove that the frequent concurrence of gall-stones and malignant disease is not accidental, but that the former by their irritation produce the latter. I mention this fact in order that I may emphasize the necessity for early recognition of gall-stone disease. Courvoisier found 72 cases with gall-stones in 84 cases of primary gall-bladder cancer. Possibly, the inaugural symptoms of gall-stone disease may be best brought to the attention of general practitioners by stating that cases of "indigestion," "biliousness," "neuralgia of the stomach," "gastralgia" and "autointoxication" are, in the majority of cases, in reality, cholecystitis, and should be recognized and treated as such. The diagnosis can usually be confirmed by a physical examination of the gall-bladder and a search for the pressure pain points described. The symptoms which heretofore have been considered inaugural, for instance, stone colic and jaundice, are really terminal and are found only after the disease has been long existent and indicate a late stage of the disease.

Our knowledge of cholecystitis is increasing rapidly not only as a pathologic condition affecting the gall-bladder alone, but also affecting the liver itself and the pancreas. We are also discovering that the stomach is a much maligned organ and that it has heretofore been charged with offenses of which it was guiltless and for which its nearby neighbor, the gall-bladder, has been proved responsible. In a word the gall-bladder as an important factor in the causation of trouble in the organs adjacent is assuming a rapidly increasing important rôle. In the beginning of gall-bladder surgery attention was directed to the organ itself and it was made

the objective point of all surgical measures. But it was found that with the relief of the pathologic condition in the gall-bladder not only was the original purpose, for which the operation was done accomplished, but in addition, over and above this, symptoms disappeared which had formerly been attributed to other organs. Putting operative findings and clinical together, therefore, a number of obscure abdominal disturbances are coming out of the darkness of ignorance into the light of scientific knowledge.

DISCUSSION

DR. JOHN MONROE BANNISTER, Omaha: I would like to relate my experience in the Philippine's, in reference to this line of work. Conditions of extreme congestion of the liver and enlargement are not found in the United States as they are in the tropics; consequently a diagnosis of enlarged gall-bladder is easy. While in the Philippines, I did a large amount of surgical work. There were many cases of liver disease to treat, and in the number of patients operated on there was not a single case of disease of the gall-bladder. Frequently disease of the gall-bladder was suspected, but in these cases the livers would be so enlarged from passive or active congestion as to fill the abdominal cavity. It was a rule in suspicious cases to perform laparotomy as a routine measure, going in, getting the enlarged liver out of the way, exploring and examining the gall-bladder to see if there was anything the matter with it. It was found that the livers of these patients were very much congested and enlarged. It was also a rule to aspirate the liver and if an abscess was not found a good deal of blood was drawn off; but these patients invariably did well.

DR. A. I. MCKINNON, Lincoln, Neb.: It is possible to have biliary or gall-stone colic without the presence of gall-stones. Gall-stones are due ordinarily to infection. Cholecystitis frequently accompanies infectious diseases, and many times the trouble begins in childhood, following some infectious disease. When there is an acute cholecystitis, for instance, complicated with pneumonia, there is jaundice, and as the growth of fibrous tissue replaces the exudate, contraction takes place, and obstruction to the bile tracts occurs.

DR. A. B. SOMERS, Omaha: The removal of the gall-stones does not always relieve or cure the primary condition which still exists, and the patient should be taught to go to a physician when he gets through with the surgeon, unless the surgeon is also a physician.

DR. W. F. MILROY, Omaha: I want to go one step further than the last speaker, and say that these patients should go to see a physician before consulting a surgeon, as I am firmly convinced that most of these individuals can be cured by medical treatment and require no operation whatever.

Surgical Suggestions for the Treatment of Chronic Appendicitis

DR. A. I. MCKINNON, Lincoln, Nebr.: In this paper I recommend that the incision be made high enough for examination of the upper abdomen and treatment of those parts which may be found involved. This incision can be made about the same as a gall-bladder incision, the lower end being even with the umbilicus, or at a point where most authorized incisions begin. Through such an opening, the appendix can be easily pulled up and with the aid of a proper position of the patient the whole abdomen and pelvis will be open for examination. For further faciliating this exploration, I advocate the sitting posture of the patient. This not only allows complete exploration, but permits it to be done through a small incision. I have used this posture for several years with great success in handling the abdominal viscera. Chronic appendicitis often either complicates or is complicated by a pathologic condition of the upper abdomen, which, if overlooked, will lead to continued trouble on the part of both patient and surgeon.

Scientific Feeding

DR. MINDA A. MCLINTOCK, Atchison, Kans.: Man is said to be the net product of what he eats and drinks. Food bears the same relation to him that soil does to vegetation. No man can be at his best physically who is underfed. A celebrated chemist says: "If we could ascertain perfectly the demands of the human body and supply perfectly those demands, life might be prolonged indefinitely." He enjoys the best health, the keenest mentality, the high physical powers, who can select for himself those articles of diet that will most nearly supply all the constituent parts of the body in natural proportions. To do this: First, food must contain all the nutritive elements the body requires. Second, only such foods must be combined at each meal as will produce chemical harmony in the stomach. Third, food must be proportioned so that the body will not be overfed with certain elements of nutrition and underfed with others. No less important is the observance of natural laws or idiosynerasies, namely, age, sex, temperament, environment, together with the season of the year, occupation, exercise, etc.

The Bacteriologic Diagnosis of Epidemic Cerebrospinal Meningitis

DR. S. R. HOPKINS, Omaha: I wish to present a brief and practical method of establishing a bacteriologic diagnosis in this affection. A Gram-negative diplococcus occurs most often in the interior of the leucocytes of the spinal fluid. There are six species of Gram-negative diplococci with which it is possible to confuse the diplococcus of Weichselbaum, and chief among these are the diplococcus of gonorrhea and the so-called pseudomeningococcus. For practical purposes, however, the identification of the meningococcus in the spinal fluid withdrawn by lumbar puncture from a patient presenting phenomena suggesting meningitis, is a procedure fraught with little difficulty, and it is the only means of affirming a positive diagnosis. In staining by the method of Gram it is well to finish the staining process by flooding the slide with a 0.25 per cent. solution of eosin in water, thus giving to the Gram-negative bacteria a red color. In order to establish a certain bacteriologic diagnosis one should in every instance resort to cultivation of the germs on artificial media, and in this connection I wish to state that I have never encountered the slightest difficulty in obtaining a luxuriant growth of the meningococcus, by simply inoculating a slant of plain agar or blood serum, with the infected spinal fluid, and this, in from eighteen to twenty-four hours. In inoculating the artificial culture media, it is necessary that the inoculation be made very soon after the withdrawal of the fluid, as the germs are short-lived outside of the body and show little resistance to drying. The growth on blood serum is more abundant than on agar and it does not liquefy it. The growth appears as white, glistening spots which rapidly coalesce. The organisms do not live long on the media, and if one would keep a culture for any time it is necessary to reinoculate other tubes at least every forty-eight hours.

Advantage of Cholecystostomy in Draining the Deeper Biliary Tracts

DR. H. G. WELPTON, Des Moines, Iowa: This paper was suggested by a serious and unexpected complication that attended two cases of cholecystectomy in my practice. The cases were of the simple type, without adhesions, obstruction, or destructive changes. The gall-bladder was removed with much the same assurance of a cure as we have when we remove an infected appendix. In one of the cases a large calculus formed with the hepatic duct above an acute angulation of the common duct. The angulation was due to an adhesion to the colon. In the other an acute exacerbation of a chronic pancreatitis came on at intervals obstructing the common duct. My patients were only partially relieved by removing the stone, by releasing the adhesions, and by drainage. Since reviewing the literature, I have limited cholecystectomy to those cases in which either the gall-bladder or cystic duct has been contracted or obstructed, or in which an irreparable damage from gangrene, infection, ulceration perforation or malignancy has occurred. I prefer to leave the gall-bladder, when possible, since excision does not remove the infection that is in the common and biliary ducts. I believe from my clinical, pathologic and bacteriologic findings that the common and biliary ducts partake of the infection of the gall-bladder in every case to a greater or less degree. Gall-bladder drainage offers the best means of a complete cure of the infections of the deeper tracts as well

as those of liver and pancreas. It also provides for a cholecystenterostomy in case of complete obstruction, and serves as a guide to the deeper structures. In cases in which later calculi reform, or partial obstruction develops, cholecystenterostomy will prove a happy solution of these complications.

Diagnosis and Treatment of Stricture

DR. A. C. STOKES, Omaha: In this paper I summarize the treatment of stricture of the urethra as follows: 1. Alkalies, diluents, and rest are serviceable in most cases of strictures—sometimes indispensable if there be any serious complications. 2. All uncomplicated strictures, not highly irritable or resilient, should be treated by dilatation with soft instruments up to No. 15 French, and with conical steel sounds afterward; reintroductions being made every third or fourth day. 3. Until well acquainted with the temper of a given stricture, every sounding should be preceded by hexamethyelenamin, followed by nitrate of silver. 4. Dilatation need rarely be carried beyond the caliber of the normal meatus. 5. Any stricture resisting dilatation must be cut. 6. For the pendulous urethra do internal urethrotomy; for the perineal urethra do external urethrotomy or the combined operation. 7. In general, anterior stricture of the urethra is curable; deep stricture of the urethra incurable. 8. Impassable strictures without retention may usually be overcome with whalebone bougies by time, patience and skill. If they finally proved impassable, the treatment is external perineal urethrotomy. 9. Retention is treated by hot baths, ether, opium, tincture of the sequichlorid of iron; failing these, by aspiration, or by external urethrotomy without a guide. 10. Traumatic stricture may be prevented by section at the time of injury. Once having shown itself, it usually requires excision for a cure. 11. Resilient and nodular strictures are best treated by excision. 12. Irritable strictures may often be cured without cutting.

Does the Present Conservatism in Pelvic Surgery Serve the Best Interest of the Patient?

DR. BERNARD A. MCDERMOTT, Omaha: Summing up the literature I find that it gives widely divergent views as to the relative value of conservatism in pelvic surgery. But whether we advocate conservatism or radicalism in pelvic operations our object should be the same—namely, the relief of existing conditions. If in this we fail, the operation has been a failure. My experience makes me oppose conservatism or any plastic work in certain pelvic lesions, such as a partially diseased tube or ovary. In the latter condition, the resection of a cystic or partially diseased ovary, as a routine procedure, it is to be mentioned only to be condemned, as the cutting and plastic work necessary to such an operation usually produce more postoperative pain tenderness and general symptomatology than would the original condition. I have seen this follow so many times that I am convinced that, if there is any real reason for saving the ovary other than conservatism of ovarian tissue, it is far better for the patient to remove the entire organ or leave it entire. Most operators leave one or both ovaries after hysterectomy for a non-malignant condition, stating that the menopause is much milder and the woman is better off in every way. Granted that the menopause may not be so acutely ushered in when the ovaries are left; but does not the condition last indefinitely? Is it not better for the woman to have the symptoms early? Though acute, they will be brief. Again, in uteri containing multiple fibroids, is it not better as a routine procedure to do a supravaginal hysterectomy than myomectomy?

Other Papers Read

The following papers were also read: "Cataract," by Dr. F. B. Tiffany, Kansas City, Mo.; "Dementia," by Dr. G. H. Hill, Des Moines, Iowa; "The Neglected Anus," by Dr. D. T. Quigley, North Platte, Nebr.; "Cancer of the Breast," by Dr. B. B. Davis, Omaha; "Diseases of Metabolism as a Group," by Dr. Alfred C. Croftan, Chicago; "Renal Tuberculosis," by Dr. F. Kreissl, Chicago; "The Objects of Mechanical and Surgical Treatment of Infantile Paralysis," by Dr. H. Winnett Orr, Lincoln, Nebr.

SIXTEENTH INTERNATIONAL MEDICAL CONGRESS

Held at Budapest, Aug. 29—Sept. 4, 1909

(Continued from page 1045)

Treatment of Diffuse Free Progressive Peritonitis

DR. ARPAD G. GERSTER, New York: The basis of this report is formed by 609 cases of the malady, observed at Mount Sinai Hospital during about ten years. Of these, 461 were caused by the appendix (out of a total of 3,144 cases of appendicitis) and 148 were due to injuries and affections of other viscera. Difficulties surround the making of a precise diagnosis and estimation of prognosis in peritonitis. To uncertainties dependent on these difficulties in establishing a uniform and reliable nomenclature of the disease may be ascribed the small value to be placed on statistics. In accepting the diagnosis of free progressive peritonitis very strict criteria must be insisted on; and even with these statistics have only a relative value. Every patient with appendicitis and *a fortiori*, every patient with peritonitis, in whatever stage of the malady they may present themselves to the surgeon, ought to be operated on without delay, except moribund patients. The arguments by which the advice is supported, not to operate on "intermediate" cases of appendicitis on account of the high mortality, are fallacious. A tabulated *résumé* of the results of operative treatment in 461 cases of diffuse, free, progressive peritonitis, due to appendicitis, shows a steady decline of mortality from 79 per cent. in 1899 to 14 per cent. in 1908. This improvement is ascribed to the abandonment of heroic and incisive measures in cleansing of pus and in drainage of the peritoneum, which were in vogue in 1899, and the adoption of early, simple, rapid and less exhausting operative procedures, complemented by Fowler's posture and Murphy's proctoclysis. Of complications, the most common, observed in 9.3 per cent. cases, was that of secondary intraperitoneal abscess. This may be regarded as a residual manifestation of a primarily general process. Mechanical ileus, rather frequent (158 per cent.) in 1899, has become much rarer (5.4 per cent.) since the abandoning of the use of extensive gauze packings. My procedure is as follows: (1) Preliminary lavage of the stomach; (2) anesthesia by nitrous-oxid gas followed by ether; (3) rapid exposure of primary focus of infection; (4) stoppage of visceral leak by suture or tamponade; (5) gentleness and rapidity of procedure, avoidance of friction by wiping, etc.; (6) no irrigation; (7) soft rubber-tube drainage of right iliac fossa and, if necessary, of Douglas's pouch; (8) closure of external wound by three layers of suture; (9) for paralytic ileus repeated gastric lavage, low and high enemata, or systematic rectal lavage, enterotomy by stab done in intractable cases only; (10) rational administration of opiates; (11) withholding of all ingesta while vomiting is present; (12) Murphy's proctoclysis; (13) Fowler's position; (14) early incision and drainage of secondary abscesses; (15) laxatives, calomel and salts, to be given only after cessation of vomiting; and (16) tampons used for walling off necrosed areas not to be disturbed without necessity till they become detached of themselves.

Diagnosis of Laryngeal Cancer

SIR FELIX SEMON, London, Eng., described cases of malignant disease in which exceptional diagnostic difficulties were encountered and diagnostic mistakes made. They amounted to 13 in a total number of 246 cases of malignant disease seen in 33 years' practice, and after faithfully recording the salient features of each of them, he exhorted his younger *confrères* not to consider the early diagnosis of malignant disease of the larynx as exceedingly difficult, but to keep in mind the following unusual features present in the series of cases reported: 1. Malignant disease of the larynx, appearing first in the form of a curious tumefaction of the left vocal cord, which remained stationary for nearly two years before showing its true nature. 2. Chronic infective inflammation, simulating malignant disease of the larynx. Extravasation of blood into the right vocal cord and below it, simulating malignant disease of the larynx. 4. Laryngeal tuberculosis in which the laryngoscopic appearances left the diagnosis between malignant disease and tuberculosis quite undecided. 5. Laryngeal tuberculosis simulating malignant disease in a man aged 70 years. 6. Tubercu-

lous tumor, simulating malignant disease, in the anterior commissure of the vocal cords. 7. Leucoma of a vocal cord, simulating malignant disease of the larynx. 8. Epithelioma of the left ventricle of Morgagni, at first mistaken for papilloma. 9. Epithelioma originating in the form of an angioma. 10. Papilloma, occupying the whole posterior part of the right vocal cord and the inner aspect of the right arytenoid cartilage in a man aged 60, mistaken for malignant disease of the larynx. 11. Epithelioma of the larynx appearing in the form of a snow-white, sharply pointed "meadow." 12. Granuloma originating in the scar due to removal of an epitheliomatous tumor of the right vocal cord. 13. Inflamed papilloma in a man, aged 60 years, closely simulating the appearance of an epithelioma of the larynx.

Adenoid Growths

DR. CITELLI, Catania, Sicily, after referring in his historical remarks to the great merit of Meyer in making known to the scientific world such a frequent and important disease, recorded briefly the normal and pathologic anatomy of the tonsil, founded also on extensive researches of his own.

In order to be able to determine with some exactness whether a tonsil is to be considered as normal or as hypertrophied—an indispensable decision for investigators undertaking the study of the tonsil—a thorough knowledge is required of the normal evolution of the tonsil in man. The tonsils are of use during early infancy as hematopoietic organs, and besides this as organs of defense against infection. In view of their position they may also serve as a means of exit for infection, and in some cases, when the defensive elements are not sufficient for their purpose, as a means of ingress. It is not probable that the tonsils belong to the so-called organs for internal secretion, but in view of certain general or secondary disturbances which are found in adenoid-bearing subjects, and which often disappear after an operation, and, more especially on account of anatomic researches I believe it probable that the hypertrophy of the tonsil alone can determine, first the functional, and then the anatomic, alterations of the pharynx and central hypophysis. The causes of this disease may be congenital or acquired; these latter, however, will only provoke the growth of adenoids in predisposed subjects. Adenoid symptoms may be divided into local symptoms, disturbances in nasal respiration and its relative consequences, disturbances in the other respiratory organs, vocal disturbances, uricular disturbances, etc., and general or secondary symptoms, alterations in the circulation, psychic disturbances, exophthalmos, spasms of the larynx, night-terrors, nocturnal enuresis, nervous cough, etc. The treatment in the majority of cases is operation. Almost all the instruments designed (for the purpose) are good, in experienced hands. Adenoid growths, which can exert a great influence over the physical or psychological development of individuals, and hence the great utility of making such a disease and its consequences known to the public.

Present State of the Knowledge of the Prophylaxis of Dental Caries

MR. KENNETH W. GOADBY, London, England: The prevention of dental caries holds the same position with regard to stomatology that preventive medicine does to general medicine, and, as in preventive medicine, both preventive measures and treatment of the disease are essential factors. The recent developments in the appointment of qualified officers to treat dental disease in the army, navy, industrial schools, public schools, and institutions, as well as the recent development of municipal dental surgeons, are important factors in distributing knowledge. The principles laid down by stomatologists for the guidance in the prophylaxis of caries are based on a consideration of the pathology, but sometimes important questions are overlooked. In dental caries the etiology must be considered under the heading of—(a) the predisposing causes:—structure, environment, and position; (b) exciting causes:—micro-organisms and foodstuffs; and (c) contributory causes:—hygiene. In a hundred cases taken at random, 25 per cent. of the individuals had no dental caries. These were patients with suppuration of the gums and alveolar processes. The bacteria present in the mouths of all these people have been isolated and carefully tested by bacteriologic means, including fermentation of carbohydrates. It was found that in the mouths in which dental caries was not present organisms capable of fermenting lactose were less frequently present than in those in which caries was present. In mouths without caries 64 per cent. were free from lactose fermenters, while in mouths in which caries was present, or had been present and was treated, the lactose fermenters were present in 60 per cent.

Arteriosclerosis, Including Its Cardiac Form

DR. H. HUCHARD, Paris: The chief points of M. Huchard's argument were the following: There exists great confusion among pathologists as to the nature and process of arteriosclerosis, so that it is impossible to give an exact and rational definition of the disorder from the pathologic side. Neither can pure experience settle the question, but the clinical evolution of arteriosclerosis affords the method of distinguishing between that disease and atheroma. Atheroma is really a senile affection, coming on in persons of from 60 to 80 years of age, and it is entirely a vascular change. Arteriosclerosis, on the other hand, attacks persons between 30 and 60 years of age and is so largely a visceral complaint that its best name is arterioviscerał sclerosis. Gull's and Sutton's conception of an "arteriocapillary fibrosis" is incomplete. There are some arterioscleroses at their outset typically aortic and which may be called myovalvular. From the triple view-point of the pathologist, the clinician, and the therapist the distinction between such endocardial valvular "cardiopathies" and the endarterial "cardiopathies" are of considerable importance. The six principal causes of the latter condition are gout and "uricemia," lead poisoning, syphilis, faulty diet, tobacco, mental strain, and overwork. There are four stages recognized clinically in the evolution of arteriosclerosis: (1) arterial presclerosis; (2) the cardioarterial stage; (3) the mitro-arterial stage; and (4) the final stage of cardiac failure. The symptoms fall under the three heads, toxic (the predominant group), cardioarterial, and renal, and each requires a special line of treatment. The beginning, the course, and the climax of the arterial cardiopathies are comprised in the word intoxication, having for its chief symptom dyspnea. Careful distinction must be made between a pathologic lesion and clinical disease. Simple atheroma may remain for a long time nothing more than an anatomic change. In cardiosclerosis, on the other hand, the subjective symptoms predominate over the physical signs which may indeed be absent, as in mitral contraction of sclerotic origin. In mitral regurgitation of similar origin the patient may be considered "a mitral case" so far as his murmur goes, but he is really "an arterial or aortic case." From the outset the renal factor is of great importance in determining the retention of the toxic substances and the increase in the arterial tension. Renal insufficiency is an early and constant symptom in arterial cardiopathies even if there be no albuminuria, and this fact accounts for the importance of renal treatment to eliminate the toxins during the whole course of the disease. Clinically cardiosclerosis can take its beginnings in the kidney, the heart, or some other organ, but there is no such thing as arteriosclerosis without both arterial and renal lesions. It may happen that cardiac lesions of rheumatic origin become complicated by arteriosclerotic changes between the ages of 30 and 50 years and a fresh train of symptoms may ensue. Asthma and emphysema only lead to stoppage of the heart through the arterial lesions which occur with them, but asystole of true gastric origin is extremely rare. The therapeutic indications are different in the four stages of the disorder, but dietetic regimen with measures directed to the renal efficiency are always the basis of sound treatment. In a disease which is above all things an intoxication, the abuse of drugs, especially of the iodids and digitalis, is to be especially avoided, and also the abuse of so-called anti-sclerotic serums, high-frequency currents, and climatic and some mineral water "cures."

The Nature of Antagonism in Bacteria and Its Practical Importance

PROF. N. PANE, Naples, Italy: Among the pathogenic microbes only the bacillus of anthrax can be destroyed in the system by the antagonistic action of several bacteria—*Streptococcus erysipelatis, Staphylococcus pyogenes, Bacillus*

pyocyaneus, pneumococcus, and *Bacillus prodigiosus*—under special conditions. The most favorable of these conditions is the subcutaneous inoculation of anthrax mixed with one of the others in suitable doses. The particular state of virulence or non-virulence of the antagonists, and the choice of the animals for experiment are of great importance. The antagonistic action of a bacillus may meet with complete success in the animal organism, even when it fails or is only partially successful when applied to infected grazing land or when tested for on nutritive substances in the laboratory. The substance or substances which act against the bacilli of anthrax in the organism belong partly to the antagonist and partly to the antibodies in the organism itself. As regards the nature of the antagonistic substances, confining ourselves to the *Bacillus pyocyaneus*, which is the most energetic and the most certain in its action, it is to be observed that the broth culture of this bacillus, killed by exposure to a temperature of 55 C. for an hour, shows in the test-tube a bactericidal action at from 35 to 37 C. by far superior than that which is shown at 15 C., and this bactericidal action weakens considerably after heating to 100 C. for an hour. If the dry remains of the broth culture be mixed with absolute ethyl alcohol a clearly demonstrable bactericidal substance is diffused into the alcohol, although it is readily separated from the alcohol by evaporation at 60 C. The practical application of the resistance of *B. pyocyaneus* to anthrax might be made in the vaccination of animals susceptible of spontaneous infection, since a considerable immunity can be conferred on animals under experiment by means of subcutaneous inoculation with the anthrax bacillus mixed with the soluble products of *B. pyocyaneus*.

A Comparative Estimate of Pharmaceutical and Physical Agents in Therapeutics

DR. C. COLOMBO, Rome, Italy, reviewed the physiologic and therapeutic action of certain chemical and physical agents on the human body in the light of recent medical literature and of his own experiences. He considered three possible requirements of a physician in search of a special remedy. He may want to produce an effect which could be obtained equally well from a physical or a chemical agent, or an effect which could only be obtained from one or other of those agents. In the first case Dr. Colombo would always choose the physical agent for the following reasons. Such an agent constitutes an external stimulus of which the nature and effect on the body is exactly known, the effect is always the same for the same stimulus with the intensity of which it is in strict proportion. On the other hand, the chemical agent does its work inside the body in contact with the cellular fluids; it follows that however well we may understand its composition and its action *in vitro*, we remain in the dark as to its effect *in corpore* and of the resulting reaction of the organism. Dr. Colombo quoted examples of each of those three groups.

Recent Progress in the Clinical Study of the Evolution of Syphilis

DR. H. HALLOPEAU, Paris, France: When the chancre manifests an intense reaction, and the morbid products formed by it are of great virulence, it is a sign of an over-activity of the treponema. The germs given off by the chancre may take different routes. (a) They may go by the lymphaticus, which transmits them with or without lymphangitis to the neighboring lymphatic glands. (b) They may go by the capillaries. (c) They may enter the neighboring tissues where they spread. These last show a higher degree of virulence than those which later come from the lymphatic glands, for the glands possess a great power of attenuating the micro-organisms. Among the ultravirulent manifestations must be put most of the secondary manifestations of the vulva, of the prepuce, and of the parts around the anus. When the lymphatics and the lymphatic glands do not transmit the micro-organisms infection can only take place by the blood stream, and then the roseola does not appear, and, therefore, it may be said that the roseola is associated with the early affection of the lymphatic glands. The generalized infection only takes place at the beginning of the secondary stage and later the lesions are spread exclusively by intrainoculation and extrainoculation. 4. In grouped syphilides, the initial lesion often shows signs of a virulence greater than that of the lesions derived from it. On the other hand, extensive cicatricial syphilides may continue to spread with increasing outbursts, so it is clear that the resistance of the tissues can be increased or diminished. As the disease advances in evolution it gives rise to modifications in the intensity and the modification of the treponema, and, consequently, in the nature of the toxins produced. The pathologic action of the treponema is entirely due to the soluble substances to which it gives rise. In different subjects the treponema is prone to attack certain tissues. There are also affections liable to be produced under the influence of syphilis and later progress spontaneously, and these are the so-called syphilitic deuteropathies.

Treatment of Lupus Erythematosus

SIR MALCOLM MORRIS, London, Eng.: The disease appears to be essentially a chronic inflammation of the skin, local in origin, and depending on a condition of the circulation which makes the integument prone to vasomotor disturbance. This may cause a predisposition to toxic infection, but neither the fact of such infection nor its nature has been positively demonstrated. Each case must be dealt with according to its peculiarities. The treatment should be constitutional and local. Under the former head must be included careful regulation of the diet, so that the intestine may not be loaded with materials that may form a favorable soil for infection. Anything, like coffee and tea, which causes flushing of the face, is contraindicated. Quinin is often useful. Locally, in the hyperemic stage, cooling lotions and ointments of subacetate of lead may be prescribed. Ichthyol in the form of a lotion or an ointment is among the most useful of local remedies. In chronic cases the constant application of a strong solution of ichthyol is the best remedy, but iodin liniment is also valuable. In several conditions linear scarification or light touches of the thermocautery often gives good results. In subacute cases high-frequency currents and in chronic cases the Finsen light and the *x*-rays may be used with success. These agents are particularly useful in the later stages when there is thickening of the integument.

(*To be continued*)

Medicolegal

Liability of Counties to Physicians for Expert or Other Witness Fees in Criminal Cases

The Supreme Court of Wisconsin says that the complaint in the case of Philler vs. Waukesha County evinced a purpose to state a cause of action against the county for the value of a physician's time and services in making examinations of the symptoms and mental condition of a defendant in a criminal trial, and in attending court to testify with respect to his sanity "as an expert witness," in the words of the complaint. Except for said quoted clause, there was no suggestion as to the character of the testimony he gave, whether it related to facts which he discovered by observation, albeit a trained and expert observation, or to an opinion, probably both.

The effect of the Wisconsin statutes is to require all persons to obey the subpœna of a court, and their compensation for such obedience is fixed at $1.50 per day, with mileage. In a civil action between private parties those fees must be paid in advance, if demanded. In a criminal case they need not be tendered or paid in advance, though doubtless a contract may in some cases be implied to pay the specified fees for the service. The duty of every witness is to attend as long as commanded, and to testify to all material facts within his knowledge. This is a duty resting on all members of the community as such to aid the courts in the administration of justice and insistence on it by the courts does not constitute such a taking of property as is forbidden by the Constitution.

This was not seriously controverted by the plaintiff's counsel in its application to what they called ordinary witnesses testifying to ordinary facts, but they contended that, when a physician is called on to give expert testimony, his services are of a different character, and can not be demanded without compensation.

The word "expert" in this connection is somewhat loose and uncertain. Much of the testimony of a so-called expert is in no wise different in character from that of any other witness. He may be called on to testify to that which he sees, hears, or otherwise discovers by the use of his senses; but those facts may be such that no one but a trained expert would discover them by such use of his senses. A skilled physician discovers facts by the use of sight, hearing, or feeling which another man might not. But this distinction is one of degree merely, and not of kind. All men differ in their ability to observe accurately and in the certainty of knowledge which they derive from such observation. An illustration of such testimony, not in the legal sense expert, and yet dependent on the peculiar knowledge and abilities of the witness, is presented in Hocking vs. Windsor Spring Co., 131 Wis., 532, where an oculist, not competent under the Wisconsin law to testify as an expert, was allowed to testify to physical injuries which doubtless could not have been seen and discovered or described by a non-professional.

There can be no doubt in this field that every man owes a duty to attend and testify to the material facts that he knows notwithstanding the knowledge thereof may be due either to his learning or his expert faculties. Any attempt to draw a line between the exceptionally stupid and non-observant person and others who, by greater alertness, training or skill in observation, may acquire more knowledge, is impracticable and irrational. The educated and intelligent owe the same duty of aid to the courts up to the limit of their ability as does the less competent man—the man whose services are worth $50 per day as well as he whose time is worth but $2.

The more difficult field is entered when the court approaches the question of calling on men of exceptional experience and qualifications to give their opinion as the result either of facts which they observe or from an hypothetical statement of facts. This is the real field of expert evidence. It is there that the expert can testify and the non-expert can not. But here also the expression "expert" is of very broad meaning. It includes the mechanic, whose opinion may be asked on the strength or value of a brick wall or chimney, or the farmer, with reference to quality and value of lands, crops or farm animals, as well as the man of most abstruse research and learning in the fields of chemistry and bacteriology or medicine. So here, again, no line can be drawn on principles between the men or the testimony in favor of a physician over a bricklayer.

It would seem on principle, in analogy to the previous discussion, that, if from the witness' observation or from the hypothetical facts stated to him he has consciously in mind either knowledge or an opinion, such knowledge or existent opinion is a fact as to which he may be required to testify; but, as is often the case, and in the higher branches of expert learning perhaps usually, an amount of study, experimentation, thought, and reflection may be necessary to the formation of an opinion, and the witness may often honestly answer that he has not formed such opinion. The chemist, after submitting a substance to various analyses and reactions, may yet need to study the books or make further experimentation before he can assert the presence or absence of certain elements. The physician, after exhaustive inspection and tests, is still often left in doubt, and does not venture an opinion to his patient until after long study. Such study, reflection, etc., is not the function of the ordinary witness. It is not within the command of the subpœna, and there is no reason to think that the statutes were intended to require it of any witness merely as such. If a party desires that any witness, expert or otherwise, equip himself with knowledge by research or inspection, it may employ him to do so, but such employment will be controlled by the ordinary rules of contract, express or implied.

In some of the earlier text-books and decisions it was asserted that courts could not or would not compel certain professional men to attend and testify on professional subjects for the mere ordinary witness fee, more especially on the ground that the time of such witnesses was so valuable that they ought not to be thus coerced. Most of these seem to result from a custom amongst the English courts to treat physicians and lawyers as exempt from coerced attendance on the same terms as other witnesses, a custom often criticized, but which had some justification in an early statute which provided for the tender to a witness "according to countenance or calling his reasonable charges."

The fallacy of the reason on which these earlier customs were supported has, however, been recognized and their authority repudiated in a great multitude of more recent decisions. The result of these cases is that the expert, be he mechanic, physician, engineer, or chemist, must obey the subpœna of the court, and must testify to such facts as are within his knowledge, whether these facts may have required professional learning, study, or skill to ascertain them or not. If, when placed on the witness stand, he has such knowledge, he must testify to it. They substantially all recognize, however, that the subpœna under statutes like those of Wisconsin does not compel the expert or other witness to equip himself by labor with ability to testify either to an opinion or to any other fact which might be ascertained by special services, and hence that from the mere subpœna and compulsion to testify as a witness results no implied contract on any one to pay the expert anything in excess of the statutory fees, recognizing, however, that, if he does perform work in preparation and qualification to enable him to testify at the request of any person, implied contract for reasonable compensation may arise, or an express contract will be valid.

Applying these principles to the present case, it is very obvious that no statute in Wisconsin has authorized any one to make any contract for such services at the expense of the county. The allegation of the complaint was that all services of that character were performed at the request of the attorneys for the accused, albeit with their assurance that the county would be liable therefor. Liability can not be imposed on counties or other governmental subdivisions of the state except in accordance with statute law, and no statute was referred to conferring any such authority on counsel for one accused of crime. The court is therefore unable to discover any basis on which the county of Waukesha could be held liable for any compensation to this witness other than the statutory fees, if indeed it could be made liable for those.

The right to fees from the public must be found in the statute. Nowhere in the Wisconsin statutes is there any provision for the payment of a defendant's witnesses except in Section 4062 of the Wisconsin Statutes of 1898, which permits witnesses "ordered" for the defendant by the court or judge to be paid their fees out of the county treasury in the same manner that witnesses for the state therein are paid; that is, only on a certificate of the clerk of court (Section 4060) after a prior order by court or judge. This is a necessary prerequisite to the existence of any liability of the county therefor. The complaint in this case failed to allege either any order of court or judge for the appearance and attendance of the plaintiff, and the form of procedure in presenting his claim to the county board at least impliedly negatived the issue of any certificate by the clerk of court. Without such prerequisites, no cause of action, even for the amount of the statutory fee, can be stated. The court therefore concludes that the complaint failed to state any cause of action against the county.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York

September 18

1 Practical Aspects on the Surgery of the Peritoneum. W. A. N. Dorland, Philadelphia.
2 Significance of Certain Pathologic Conditions in the Fossæ of Rosenmüller. J. W. Jervey, Greenville, S. C.
3 The Influence of Meteorologic and Climatic Conditions on Metabolism. J. B. Nichols, Washington, D. C.
4 Anesthesia in the Control of Inflammation. J. W. Wainwright, New York.
5 Our Medical Educational System. O. L. Mulot, Brooklyn.
6 *Clinical and Bacteriologic Study of Forty-one Consecutive Cases of Diphtheria. E. E. Wuttke, Halstead, Kan.
7 Compilation of Facts Concerning High-Frequency Currents. W. P. Worster, New York.
8 Case of Hemorrhagic Renal Infarct. F. R. McCreery, New York.

6. **Diphtheria.**—A summary of the 41 cases reported by Wuttke may be made as follows: In 13 cases there was a typical pseudomembrane. The bacilli were longer than in the non-membranous, averaging 3 microns on the 24-hour cultures; the cases ran a more severe course and were frequently followed by paralyses. Twenty-eight cases never exhibited membrane at any time. The bacilli in these non-membranous cases were smaller than those in the cases with membrane, running from 1 to 3 microns, most of them being about 1.5 microns long. These cases ran a milder course throughout, responded readily and in a characteristic manner to treatment by antitoxin, none developed paralysis. It would seem that in these cases the bacilli belonging to the short variety were not so virulent as the longer forms in the cases with membrane. One case followed a peritonsillar abscess after its spontaneous rupture. Two cases followed scarlet fever, with an interval of perfect health of four and seven weeks, respectively. One case was followed by an abscess due to staphylococci and streptococci, which was treated surgically. Paralytic sequelæ were noted in 5 cases. In three of these there was a myocarditis. Antitoxin in doses of 4,000 units was administered to all patients as early as possible. In 2 advanced cases this dose was repeated twice. Recovery was complete and prompt in all cases. No local treatment was used in any case. Prophylactic doses of 1,000 units each were given to 54 individuals who had been exposed. None of these developed the disease. The only undesirable effect of the serum noted was an urticarial eruption in about 20 per cent. of all cases, but most frequently in those cases in which only 1,000 units had been administered.

Boston Medical and Surgical Journal

September 16

9 Relationship Between True and False Angina Pectoris. G. G. Sears, Boston.
10 *Spina Bifida Occulta. J. W. Sever, Boston.
11 *Cysts of the Long Bones. C. C. Simmons, Boston.
12 Fatty Infiltration of the Liver in an Infant of Three Months. C. A. Pratt, Fall River, Mass.
13 The Pediatric Society and the General Practitioner. M. Kelly, Fall River, Mass.
14 The Importance of Distinguishing Simple Round Ulcers of the Duodenum from those Ulcers which Involve the Pylorus or are Above it (concluded). E. A. Codman, Boston.

10. **Spina Bifida Occulta.**—Sever reports 11 cases, the deformity occurring in the cervical region in 4 cases, the dorsolumbar region in 1 case and lumbar region in 6 cases. Paralyses were present in 4 cases; dislocation of hip in 2 cases, and scoliosis in 2 cases. Sever says that operation is not indicated in a large number of these cases, especially when not accompanied by pain, anesthesia, hyperesthesia or complete paralysis. In a number of cases, the deformity itself cannot be corrected and one has to devote attention to the complications. Hypertrichosis is not constant, but is more frequent in the low dorsal and lumbar region. Lateral curvature may or may not exist, and if it does, it is to be treated as such. Prognosis for life is good and in the paralytic cases not a great deal can be done except to attempt to correct the deformity.

11. **Cysts of Long Bones.**—Simmons reports three cases of the rarer forms of bone tumors: (1) Bone cyst of the head of the humerus with fracture; (2) bone cyst of neck of femur, with fracture; and (3) bone cyst of shaft of femur, with spontaneous fracture. From a review of the literature and the history and findings in these three cases, Simmons draws the following conclusions:

1. The so-called solitary cysts of the long bones are in most cases due to the degeneration of pre-existing tumors, that is, growth and softening of a chondroma arising from a misplaced piece of epiphyseal cartilage. This theory, however, does not account for all the cases.
2. The tumors are essentially benign growths and may be cured by a conservative operation.
3. They are seen almost exclusively in children and young adults.
4. In any case of spontaneous fracture or fracture following slight violence, a radiograph should be taken to determine the presence or absence of a bone cyst as a predisposing cause.
5. A positive diagnosis is impossible without a radiograph, which should be examined by a man conversant with the appearance of bone tumors.

New York Medical Journal

September 18

15 Surgery of Cirrhosis of the Liver. B. M. Ricketts, Cincinnati.
16 Treatment of Mechanical Constipation and Obstipation. S. G. Gant, New York.
17 *Determination of Casein in Cow's Milk. L. L. Van Slyke and A. W. Bosworth, Geneva, N. Y.
18 *A New Diagnostic Skin Reaction in the Acute Infections. L. K. Hirshberg, Baltimore.
19 *An Apparatus for the Chemical and Bacteriologic Examination of Gastric Contents and Feces. A. Bassler, New York.
20 *Treatment of Recurrent Hordeolum. A. Brav, Philadelphia.
21 *Mammary Fibroadenoma. A. Denenholz, New York.
22 Physiology and the Second Law of Thermodynamics. F. H. Garrison, Washington, D. C.

17. **Determination of Casein.**—The method described by Van Slyke and Bosworth is said to require only apparatus and reagents that are in common use; its operation in the determination of casein in a sample of milk requires only from 12 to 15 minutes; and the results usually come within 0.1 or 0.2 per cent. of the correct amount. With the proper equipment several samples can be run simultaneously with much economy of time. A given amount of milk, diluted with water, is made neutral to phenolphthalein by addition of a solution of sodium hydroxid. The casein is then completely precipitated by addition of standardized acetic acid; the volume of the mixture is made up to 200 c.c. by addition of water and then filtered. Into 100 c.c. of the filtrate a standardized solution of sodium hydroxid is run until neutral to phenolphthalein. From the difference between the amount of acid and the amount of alkali used, a simple calculation enables one to determine the percentage of casein in the milk examined. The method is described at length.

18. **Diagnostic Skin Reactions in Acute Infections.**—Deeming it possible to diagnosticate accurately the species and variety of infecting organism by scarifying a small area of the skin with a definite amount of each of the dead organisms suspected, Hirshberg devised the following method: The skin is scarified with sterile water, a salt solution of physiologic strength, or 50 per cent. glycerin and 1 per cent. phenol in isotonic salt solution. This is used as a control. Usually 5 other vaccinations are made. The types of organisms used depend on the suspected infection. A fairly good reaction shows a slightly reddened area in the neighborhood of 5 mm. in diameter with slightly tense, firm and hard center. A moderately good reaction shows the hyperemic area about 10 mm. persistent and distinctly infiltrated. A very good reaction shows a distinctly edematous site about 25 mm. or more and marked infiltration and hyperemia. On what this reaction depends Hirshberg has not yet determined. So far this method has been used in 22 cases. Known cases were sometimes taken in order to determine the value of the method.

19. **Examination of Gastric Contents and Feces.**—The main part of the apparatus devised by Bassler consists of the well-known form of fermentation tube, the upright limb of which has a 15 c.c. capacity and is graduated in per cents., and the bulb a 30 c.c. capacity. The tube is less than 6 inches in height, so that it will go into a medium-sized incubator, and is constructed so that 25 c.c. sufficiently fills the instrument. Into it is placed a portion of an Ewald test meal; or for the chemical test of feces, 7.5 grams of the soft end of a stool (mushy consistence) or 10 c.c. of a fluid stool (each of which are mixed in 25 c.c. of water). In the bacteriologic examinations, the tube is filled with bouillon or a 2 per cent. dextrose in bouillon and inoculated with about 1 c.c. of the test meal or 3 or 4 drops of the watery suspension of feces. In the case of the chemical test of the feces, the weighed portion of the stool is thoroughly mixed with water in a casserole by means of a common teaspoon and any large sticks of cellulose or vegetable substance present removed. The fermentation tube (a) is then placed in a water-jacketed oven, where it is kept for twenty-four hours at 37 C., when the examinations are made. If at the time of examination more or less feces and incorporated gas are seen at the top of the fluid in the upright tube, No. 3 or 4 shot are placed into the bulb which is then filled with water, and corked so that no air from without is confined. After this the instrument is shaken to allow the shot to break up the floating fecal mass at which the gases from it are liberated; such gas as escapes into the bulb is then passed back again into the upright end, the cork withdrawn, some of the fluid run out, and the observations made as follows:

First the total gas content is observed, after which in the feces tests some of the fluid is extracted and examined for indol and uroresin, and in the nutritive media for aerobic bacteria. The carbon dioxid present is extracted by introducing into the contents 1 or 2 c.c. of saturated solution of sodium hydrate by means of the pipette, and the tube inclined to permit this heavy solution to run up into the upright portion and allowing 15 minutes of time for complete extraction. The rise in the fluid corresponds to the amount of carbon dioxid present. The remaining mixed gases are then tested in the twin bottles, being driven through, when the cock is opened, by means of adjustment and blowing. The reactions are noted in the bottle which contains a very weak solution of neutral litmus (a control in a test tube being used to note the color change), or distilled water into which are put small pieces of phenolphthalein and methyl-orange papers (the first turns red with alkalies and the second turns red with acids). Another bottle contains common lead water to note the presence of sulphuretted hydrogen (turns black); and the hydrogen and marsh gas may be ignited at the outlet, but as both of these burn with an indistinguishable blue flame and neither is important in the clinical way, the authors consider that this may be omitted. With the nutritive media the contents of the closed upright limb is then examined for anaerobic bacteria.

20. **Treatment of Recurrent Hordeolum.**—Brav's line of treatment is the following: During the acute stages hot applications are advised. As soon as the acute stage has somewhat subsided, he applies locally the following mixture:

℞.	gm. or c.c.	
Tincturæ arnicæ	16	℥ss
Tincturæ opii	8	ʒii
Liquoris plumbi subacetatis dil.	8	ʒii
Aquæ destillatæ	90	q. s. ℥iii

M. S.: Apply locally by means of absorbent cotton at bed time.

After the disappearance of the stye for a period of four weeks, the following antiseptic ointment is employed:

℞.	gm. or c.c.	
Hydrargyri chloridi corrosivi	.008	gr. ⅛
Petrolati albi	8	ʒii

M. S.: Externally.

This should not be merely smeared over the lids, but should be applied with gentle massage every night. Prior to the application of this antiseptic ointment hot compresses should be applied to stimulate the circulation of the margin of the lids. While an ordinary stye does not always require the correction of any errors of refraction it is always an essential procedure in the recurrent type. It is often a contributory factor in the development of styes. Having corrected any error of refraction an antiseptic nasal wash is given. A teaspoonful of boric acid in a glass of water to be snuffed up, twice daily, is a good simple procedure. The constitutional aspect of the case must, of course, be remembered. Brav usually employs compound syrup of hypophosphites with good result. In order to keep the bowels in good condition he incorporates the fluid extract of cascara.

℞.	gm. or c.c.	
Extracti cascaræ fluidi	16	℥ss
Syrupi hypophosphati, comp.	90	q. s. ℥iii

M. S.: A teaspoonful three times a day.

This simple method of treatment has never failed in his hands and even the most protracted cases have yielded to this medication within four weeks' time, provided the intelligent cooperation of the patient can be secured.

21. **Mammary Fibroadenoma.**—Denenholz reports a case of this kind in which both breasts of a young male were involved.

Lancet-Clinic, Cincinnati

September 11

23 Therapeutic Nihilism. L. A. Molony, Cincinnati.
24 Obscure Fractures Discovered by Roentgen-Ray Examination. S. Lange, Cincinnati.
25 Acute Catarrhal Otitis Media. W. E. McKinley, St. Joseph, Mo.

Medical Fortnightly, St. Louis

August 25

26 What the Physician who has no *X*-Ray should Know about it. N. M. Eberhart, Chicago.
27 Little Stories of Physician and Patient (continued). A. H. Moodricker, Wabash, Ind.

Northwestern Lancet, Minneapolis

September 1

28 The Epidemiology of Anterior Poliomyelitis. H. W. Hill, Minneapolis.
29 Physician's Investments: Country Bank Stocks. J. J. Lambrecht, Minneapolis.
30 Plea for the Neurasthenic. W. T. Adams, Elgin, Minn.
31 *Retroperitoneal Lipoma. M. S. Henderson, Rochester, Minn.

31. **Retroperitoneal Lipoma.**—Henderson reports a case in which a tentative diagnosis of ovarian tumor was made, and exploration advised. The abdomen was opened through a median incision. All the intestines, including the transverse colon, were found down in the pelvis, while the stomach and liver were crowded up against the diaphragm. The mass was seen to be retroperitoneal, presenting largely through the gastrocolic omentum, making a tumor a little larger than a full term pregnancy. Fat lobules showed clearly through the peritoneum, and it could be made out that the tumor had its origin in the left kidney region extending through the mesentery well across into the right side. The posterior layer of the peritoneum was incised, and the tumor seen to be non-encapsulated. It was carefully shelled out, the greater part coming in bulk, but much of it being taken out piecemeal. The kidney was not molested, as it was not densely adherent to the growth. Comparatively little bleeding was encountered, and that was controlled by clamps and afterward by ligation. The posterior layer of the peritoneum was then drawn together, and the median incision closed in the usual manner. No drainage was provided. The tumor weighed 19¾ pounds. Recovery was uneventful, the patient returning to her home in three weeks.

Vermont Medical Monthly, Burlington

August

32 Hydrotherapy. J. B. Macdonald, Concord, N. H.

Colorado Medicine, Denver

August

33 Typhoid Fever in Infancy. W. T. Little, Canon City.
34 Medical Treatment of Advanced Pulmonary Disease. J. F. McConnel, Colorado Springs.
35 Treatment of Typhoid. H. S. Henderson, Grand Junction.

September

36 Importance of Early Diagnosis in Certain Troubles of the Upper Abdomen. C. B. Lyman, Denver.
37 Tuberculous Involvement of the Bones in Childhood. H. W. Wilcox, Denver.
38 Rheumatism in Childhood. W. T. Spaulding, Kersey.

Illinois Medical Journal, Springfield

September

39 Diagnosis of Exophthalmic Goiter. H. T. Patrick, Chicago.
40 *Medical Treatment of Exophthalmic Goiter. D. Hecht, Chicago.
41 *Advisability of Thyroidectomy in Catatonic Dementia Præcox. A. B. Kanavel, L. J. Pollock, and A. B. Eustace, Chicago.
42 Tuberculosis in Infants and Children. C. W. Lillie, East St. Louis.
43 *Early Pulmonary Tuberculosis Treated by Different Tuberculins. E. H. Butterfield, Ottawa.
44 *Cutaneous Reactions of Tuberculin. F. Tice, Chicago.
45 *Serotherapy of Epidemic Cerebrospinal Meningitis. F. S. Churchill, Chicago.
46 Race Breeding. J. Grinker, Chicago.
47 Typhoid from a Municipal Standpoint. H. Spalding, Chicago.
48 Immunity. W. C. Bouton, Waukegan.

40. Abstracted in THE JOURNAL, June 19, 1909, p. 2018.

41. **Thyroidectomy in Catatonic Dementia Præcox.**—In three patients operated on by Kanavel seven-eighths of either the right or left lobe of the thyroid was excised without cutting any muscle, except the platysma. The patients all made an immediate and uneventful recovery. The glands were sectioned and studied. In three cases parathyroids were removed by choice to note what effect this might have on the course. Two glands were practically normal, two showed excessive parenchymatous growth; one was a marked colloid growth. Marked hyperemia was present in all of the glands and microscopic hemorrhage was commonly present. So far as could be determined the parathyroids removed did not show any characteristic pathologic change. Kanavel concludes that while one cannot assume any distinct pathologic basis for ascribing dementia præcox to a hyperthyroidism similar to Graves' disease, the pathologic picture cannot definitely exclude a perverted thyroid metabolism as a factor. Partial thyroidectomy is absolutely of no avail in old cases. But when one remembers that Berkley has had five patients apparently completely recover and Kanavel has had two greatly im-

proved, if not cured, by this procedure, and nothing else is known which may offer any hope in this group of psychoses, it seems justifiable to continue investigations in the early cases.

43, 44, 45. Abstracted in THE JOURNAL, June 5, 1909, pp. 1878, 1881.

Mississippi Medical Monthly, Vicksburg

September

49 Diagnosis of Malaria. W. Krauss, Vicksburg.
50 The Financial Aspect of the Medical Profession. D. G. Mohler, Gulfport.
51 Why Join the County Society? M. J. Alexander, Tunica.

Philippine Journal of Science, Manila

June

52 Development of a Piroplasma and Trypanosoma of Cattle in Artificial Culture Media. E. Martini, Manila.
53 *Bactericidal Substances in Fibrin. A. F. Coca, Manila.
54 Development of the Miracidium of Paragonimus under Various Physical Conditions. P. E. Garrison, U. S. Navy, and R. Leynes, Manila.
55 Intestinal Worms of 385 Filipino Women and Children in Manila. P. E. Garrison, U. S. Navy, and R. Llamas, Manila.
56 *Relation of the Indian Form of Relapsing Fever to African Tick Fever. R. P. Strong, Manila.
57 Diet and Nutrition of the Filipino People. H. Aron, Manila.
58 Poisonous Snakes of the Philippine Islands. L. E. Griffin, Manila.

53. **Bactericidal Substances in Fibrin.**—The claim has been made in recent years that fibrin is a carrier of considerable quantities of bactericidal and hemolytic substances, and therefore is an important therapeutic means in the combating of infections, chiefly of a localized inflammatory nature. Bergel claims to have found both antibodies and complement in washed fibrin, and was the first to make practical use of this element of the blood as a therapeutic agent. Coca repeated some of the experiments described by Bergel, and always with the same result, namely, that there is an incomparably greater quantity of the substances under consideration in the serum than in the fibrin of the same specimen of blood. Consequently, the logical conclusion of his study is that dependent on the classes of substances under investigation, it must be considerably more advantageous to use the corresponding serum for the purpose of treatment. However, it becomes apparent that if the injected fibrin does prove to be efficacious in the cases mentioned, it will not be because it carries bactericidal substances.

56. **Indian Form of Relapsing Fever.**—Experiments conducted by Strong seem to show that Bombay spirillum fever is distinct from African tick fever, but that it constitutes a form of relapsing fever very closely related to, if not identical with, the forms of relapsing fever encountered in Europe and the United States. However, it does not yet seem clearly demonstrated that the American and Indian strains are distinct from the European, if not identical.

Journal of Abnormal Psychology, Boston

August

59 *Dissociated Personality. C. D. Fox, Philadelphia.
60 Complete Autopsychic Amnesia. E. Jones, Toronto.
61 Mechanism of Amnesia (concluded). I. H. Coriat, Boston.

59. **Dissociated Personality.**—The case reported by Fox was characterized by the presence of somnambulistic states and ambulatory automatism; recovery followed the employment of hypnotic suggestions.

Journal of the New Mexico Medical Society, Albuquerque

September

62 Fractures of the Skull. L. G. Rice, Albuquerque.
63 Acute Intestinal Diseases of Children. C. E. Lukens, Albuquerque.
64 Headaches. J. A. Reidy, Albuquerque.
65 Diagnosis of Appendicitis. W. L. Bishop, Billings, Mont.
66 Articular Rheumatism. F. J. Patchin, Albuquerque.
67 Nephritis or Bright's Disease. L. G. Rice, Albuquerque.

Bulletin Johns Hopkins Hospital, Baltimore

September

68 *Relation of the Islands of Langerhans to Glycosuria. W. G. MacCallum, Baltimore.
69 *Tuberculosis of the Parathyroids and its Relation to the Occurrence of Tetany in Tuberculous Meningitis. M. C. Winternitz, Baltimore.
70 *Use of Animal Membrane in Producing Mobility in Ankylosed Joints. W. S. Baer, Baltimore.
71 Municipal Management of Tuberculosis. W. C. White, Pittsburg.
72 *Chloroform Poisoning: Liver Necrosis and Repair. G. H. Whipple and J. A. Sperry, Baltimore.

68. **Islands of Langerhans and Glycosuria.**—MacCallum found that when a portion of the pancreas is separated from the rest and its duct ligated, it undergoes extensive atrophy, a tissue remaining which is apparently composed of enlarged islands of Langerhans and the remnants of pancreatic ducts. If the rest of the pancreas be removed, this atrophied remnant is capable of warding off glycosuria even when considerable amounts of dextrose are ingested. When it is removed also, glycosuria appears at once spontaneously. Whether the glycosuria would persist until the death of the animal remains to be determined, but MacCallum believes that this experiment suggests the possibility that there may be some compensation on the part of other organs, both with regard to glycosuria and the faulty assimilation in so far as it was intended as a demonstration of the specific control of carbohydrate metabolism by the islands of Langerhans.

69. **Tuberculosis of Parathyroids and Tetany.**—During the past year, two patients suffering with tetany as a terminal complication of acute miliary tuberculosis have come to autopsy at the Johns Hopkins Hospital. Both patients were colored women, aged 21 and 26 years respectively. The illness was acute, and in both cases typical symptoms of tetany had been observed during life. At autopsy both showed general miliary tuberculosis. In one of the cases there was a small focus of tuberculosis in one parathyroid gland. The parathyroids were not carefully examined in the first case, but it is interesting to note that the convulsions immediately subsided following the injection of calcium into the arm vein. Winternitz holds that it seems quite possible that in certain cases of tuberculosis there may be a marked disturbance in the calcium metabolism. This might be of sufficient extent alone to bring about a deficit in the calcium of the circulating fluids, and in this way cause an hyperexcitability of the nerve cells. This is at least a tempting hypothesis which would explain tetany in some cases of tuberculosis in which no lesion of the parathyroid is demonstrable. On the other hand, if there is already a deficit of calcium in the circulating fluids of the body, a slight injury to the parathyroids might very readily be of crucial importance and cause sufficient additional disturbance in the calcium metabolism to bring about tetany.

70. Abstracted in THE JOURNAL, Aug. 7, 1909, p. 478.

72. **Chloroform Poisoning.**—Whipple and Sperry report the results of experiments which they believe prove beyond doubt that chloroform is a powerful poison, that narcosis with this drug for any considerable length of time invariably causes central necrosis of the liver (in animals), and that this necrosis, if extreme, will cause death. The essential change is an extensive necrosis and fatty degeneration of the liver. There may be numerous ecchymoses and hemorrhages into the peritoneum or upper intestinal tract. The pancreas may show many fat necroses and ecchymoses. The kidney and heart may present a moderate grade of fatty degeneration. Repair is effected by solution of the necrotic liver cells and rapid multiplication of the remaining peripheral cells. Cirrhosis does not follow extensive central necrosis and repair.

Texas State Journal of Medicine, Fort Worth

September

73 *Experimental Study of the Use of Nitrites in Accidents Occurring During Anesthesia. O. H. Plant, Galveston.
74 *Four Unusual Neoplasms of the Uterine Adnexa. B. F. Stout, San Antonio.
75 The Musca Domestica as a Carrier of Disease: The Improvement of Sanitary Conditions in Country Homes and Villages. A. L. Lincecum, Louise.
76 Gynecologic Conditions which may Arise from Pathologic Changes in the Contents of Pregnant Uteri, with Special Reference to Chorion Epithelioma. E. Dunlap, Dallas.
77 Skin Diseases and the Public. I. Dyer, New Orleans, La.
78 Treatment of Chronic Suppurative Otitis Media. J. H. Foster, Houston.
79 Necessity of an Early Diagnosis and Treatment of Acute Purulent Otitis Media. F. D. Boyd, Fort Worth.

73. **Nitrites in Accidents During Anesthesia.**—According to Plant, the administration of nitroglycerin or other nitrites in accidents during anesthesia is not only contrary to the principles of rational therapeutics, but a dangerous procedure as well. Experiments by Plant demonstrated that nitroglycerin only exaggerates the depression of the heart and respiratory

center when it is given during those stages of anesthesia where a stimulant is indicated; for instead of having a beneficial effect in these experiments it prevented the recovery of the animals, even when artificial respiration was performed. The failure of these animals to recover from the anesthetic when nitroglycerin was used, could only have been due to the nitroglycerin itself; for in the last series of experiments in which exactly the same conditions prevailed as to anesthesia, the injection of true cardiac and respiratory stimulants (i. e., strychnin and cocain) was sufficient to bring about the recovery of the animals without any artificial respiration.

74. **Neoplasms of Uterine Adnexa.**—The cases reported by Stout are (1) bilateral fibromata of the ovary; (2) primary myoma of the broad ligament; (3) sarcoma of the ovary; and (4) primary adenocarcinoma of the Fallopian tube.

Journal Arkansas Medical Society, Little Rock

August

80 Amebiasis. J. J. Jelks, Memphis, Tenn.
81 Causation, Mode of Infection, Prevention and Hygiene of Tuberculosis. E. R. Dibrell, Little Rock.
82 Clinical Observations in Doing Mastoid Surgery. R. Caldwell, Little Rock.
83 An Interesting Case of Abdominal Surgery. G. S. Brown, Conway.
84 Reynaud's Disease. T. G. Brewer, Osceola.
85 Separation of Lower Epiphysis of Radius. T. F. Kittrell, Texarkana.

Louisville Monthly Journal of Medicine and Surgery

September

86 The Antituberculosis Movement. J. Glahn, Owensboro, Ky.
87 Cervical Lacerations. L. Bloch, Louisville.
88 *Cancer in Two Members of the Same Family. J. G. Sherrill, Louisville.
89 *Subperitoneal and Retroperitoneal Fibroid Tumor of Unusual Shape. L. Frank, Louisville.
90 Cerebrospinal Meningitis. J. B. Marvin, Louisville.

88. **Cancer.**—One of Sherrill's patients was a young man, 25 years of age, who had been suffering from symptoms of obstruction. On examination of the rectum, Sherrill found a hard cancerous tumor surrounding the gut about two inches above the anus. The patient's mother, a woman about 47 years of age, who had been having uterine hemorrhages, on examination was found to have an epithelioma of the cervix.

89. **Subperitoneal and Retroperitoneal Fibroid.**—On opening the abdomen half of the tumor was found above and the rest of it wedged into the pelvis. It could not be moved or lifted out of the pelvis; the peritoneum hugged the tumor pretty closely, passing on to the rectum. On the left side, however, was a large pus tube which had been leaking, over which tube was agglutinated the sigmoid and one coil of small gut, but as soon as these were separated the pus began to escape. Frank walled this side off with gauze and then placed a large clamp on the tube on the left side, ligated the tube and ovary on the other side and cut them away; then clamped the round ligament, then deflecting the bladder downward over the front of the tumor, the broad ligament was opened up and the ureter and uterine vessels were exposed. The uterine vessels were isolated and caught with a clamp and then the tumor was cut across. He tied all the vessels, then passed the hand down between the vagina and the deep pelvic portion of the tumor, separating the vagina, then lifting the tumor away from the separated vaginal wall with the right hand; the peritoneum on each side was made taut and split, leaving the tumor unattached and easy to roll out. As soon as it came out the tumor assumed a cylindrical shape. It sprang entirely from the posterior wall of the uterus. Frank never before removed a tumor in this manner, nor has he seen any mention of such a procedure.

Pennsylvania Medical Journal, Philadelphia

August

91 Bacterial Vaccines and the Opsonic Index. A. P. Hitchens, Glenolden.
92 *Adenopathy in Infectious Conditions of the Buccal Region. E. Rosenthal, Philadelphia.
93 *Importance of Rhinologic Examination in Meningitis of Doubtful Origin. R. H. Skillern, Philadelphia.
94 Hot-Air Current in Treatment of Certain Ear Affections. L. L. Doane, Butler.
95 *Acute Contagious Conjunctivitis. O. H. Fretz, Quakertown.
96 Scope of Local Anesthesia in General Surgery. L. J. Hammond, Philadelphia.
97 Spinal Anesthesia: Clinical Study of 658 Administrations. W. W. Babcock, Philadelphia.
98 Roentgen-Ray Interpretations. S. L. McCurdy, Pittsburg.
99 A Plea for More Painstaking Diagnosis in Chronic Gastric Disturbances. W. Howe, Shinglehouse.
100 *Recent Improvement in Operations for Tumors of the Breast. J. H. Gibbon, Philadelphia.
101 Gall-Stones. H. C. Hoffman, Connellsville.
102 The Campaign against Cancer. J. W. Wainwright, Buffalo, N. Y.

92, 93, 95. Abstracted in THE JOURNAL, Oct. 24, 1909, pp. 1455, 1456.

100. Abstracted in THE JOURNAL, Oct. 31, 1909, p. 915.

West Virginia Medical Journal, Wheeling

August

103 Rheumatism in Children. S. L. Jepson, Wheeling.
104 Infant Feeding. E. F. Glass, Wheeling.
105 Diphtheria. G. D. Jeffers, Parkersburg.
106 The Child and the Public School. O. G. Wilson, Wheeling.
107 Defective Eyesight in Public School Children. E. R. McIntosh, Elkins.
108 Laryngismus Stridulus—Report of a Fatal Case. H. Beates, Philadelphia.

September

109 Nervous Dyspepsia—Misapplication of the Term. T. A. Williams, Washington, D. C.
110 Fractures. A. P. Butt, Davis.
111 *Exophthalmic Goiter. J. A. Guthrie, Huntington.
112 Cardiac Asthenia, Cheyne-Stokes Respiration, Bradycardia, Adams-Stokes Syndrome. L. D. Wilson, Wheeling.
113 *A New Suture. R. M. McMillen, Wheeling.
114 Piece of Stone in the Iris for Fifty-Four Years. J. L. Dickey, Wheeling.

111. **Exophthalmic Goiter.**—Guthrie reports three cases of exophthalmic goiter treated successfully with Beebe's serum. The symptoms were typical, so that there was no doubt about the correctness of the diagnosis. The cases were recent ones. A cure was effected in each instance in about three months.

113. **A New Suture.**—McMillen has devised a suture which he believes to be superior to the sutures commonly employed. It is made as follows: First put in the suture the same as the ordinary interrupted suture. Thread the reverse end of suture, insert needle into the skin very close to the edge of the wound, about one-sixteenth of an inch. Pass the needle through the skin only, and on over, and catch the skin on wound side and come out on cuticle side about one-sixteenth inch from edge. The suture is then tied by a reef knot drawn with sufficient force to bring deep structure together. The inner margins of the skin will then be seen to be in exact apposition, and the cut surfaces of the skin will be together when the pressure of the dressing is applied. The knots are at the side of the wound, and their removal will not disturb the line of union. The line of union is not constricted by the suture and the blood and nerve supply is not interfered with. He states that this suture reduces the size of the scar to a minimum.

Journal Michigan State Medical Society, Detroit

August

115 Surgery in Treatment of Hypertrophic and New Growths of the Face. A. P. Biddle, Detroit.
116 Bacteriology and its Relation to Public Health. M. L. Holm, Lansing.
117 Treatment of Exophthalmic Goiter. B. N. Epler, Kalamazoo.
118 Abdominal Diagnosis. H. E. Randall, Flint.
119 Electrotherapeutics. W. E. Ogden, Ionia.
120 Drainage Following Cholecystotomy. J. J. Reycraft, Petoskey.

September

121 Indications for Major Gynecologic Operations. R. R. Smith, Grand Rapids.
122 Technic for the Intramuscular Injection of Mercury in Syphilis. H. R. Varney, Detroit.
123 William Beaumont and his Work in the Light of Modern Research. B. R. Corbus, Grand Rapids.
124 The Specialist and the General Practitioner. F. B. Tibbals, Detroit.

California State Journal of Medicine, San Francisco

September

125 Requisites for the Treatment of the Psychoneuroses: Psychopathologic Ignorance and the Misuse of Psychotherapy by the Novice. T. A. Williams, Washington, D. C.
126 *Chronic Colitis. D. Fulton, Los Angeles.
127 Treatment of Mucomembranous Colitis from the Standpoint of its Bacterial Origin. R. L. Wilbur, Palo Alto.
128 A Phase of Unequal Inspiratory Murmur. T. C. Edwards, Salinas.
129 Conservative Surgical Procedures for Protecting and Preserving Pelvic Organs. J. H. Sampson, San Jose.
130 The Hygienic and Climatic Treatment of Arteriosclerosis. B. Reed, Alhambra.
131 Genitourinary Tuberculosis. T. J. Clark, Oakland.
132 The Theory and the Value of Tuberculins. E. von Adelung, Oakland.
133 The Immediate Removal Treatment of Morphin Habituation. R. E. Bering, Tulare.
134 Surgical Treatment of Trifacial Neuralgia. C. D. Lockwood, Pasadena.

135 Cutaneous Anesthesia as a Symptom of Osteomyelitis. H. I. Wiel, San Francisco.
136 Rheumatism: Its Relation to Diseases of the Throat. B. F. Walker, Fresno.
137 Suture of the Aorta. H. E. Castle, San Francisco.
138 *Reverse Peristalsis. R. Brown, Santa Barbara.
139 *Mercury in Tuberculosis. G. G. Moselay, Redlands.

126. **Chronic Colitis.**—Fulton's paper is a summary of 158 cases of chronic colitis in which the disease was limited to a large bowel. Of the 158 cases, 67 were males and 91 were females. The youngest individual was a boy of 6 and the oldest a woman of 65; 75 per cent. of the patients were from 20 to 50 years of age. The duration of the disease was from 2 months to 20 years. One hundred and forty-two, or 85 per cent., were poorly nourished; ptosis of the stomach was present in 118 cases. The right kidney was palpable in 53, both kidneys in 15, and the left kidney alone in 2 cases. Ninety-two had the "habitus enteropticus;" 154 had chronic constipation. In 131, the constipation was of the spastic variety. Four of the 158 patients had diarrhea, and 7 alternating constipation and diarrhea; 3 stated that their bowel functions were normal.

The symptomatology consisted of constipation, mucus, flatulence and abdominal distress, besides a large number of reflex, nervous, dyspeptic and circulatory disturbances. The treatment was based on the principle that in the large majority of cases chronic colitis is a superficial catarrh of the large bowel which accompanies chronic constipation. Contrary to usual custom no treatment was directed primarily to the nervous system. Endeavor was made to restore, when indicated, the abdominal pelvic organs to their normal anatomic relations. Properly-fitting abdominal supporters or corsets were therefore invariably prescribed when marked ptosis of the stomach or colon was present, and for displacements of the uterus operations for their correction were advised. In two cases colonic adhesions were no doubt the cause of the constipation and its resulting colitis. One of these patients was permanently cured by surgical treatment. The other presents evidence of reformation of adhesions since the operation, two months ago. Twenty-eight of the 158 patients have been lost sight of; of the remaining 130, 18, or 14 per cent., received no benefit, or soon relapsed after the cessation of active treatment; 36, or 28 per cent., were greatly benefited, by which is meant freedom from symptoms, except an occasional temporary return of constipation; 76, or 58 per cent., have remained well.

138. **Reverse Peristalsis.**—Brown did a posterior drainage operation with the Murphy button to relieve the symptoms dependent on carcinoma of the pylorus in a man of 65. The stomach was found to be about normal in size. The immediate convalescence was uneventful—patient was home in two weeks and was eating and enjoying solid food in the third week. Free easy bowel movements occurred daily. One month after the operation, having been outdoors and very comfortable all the morning, the patient had a light luncheon, immediately followed by abdominal pain, severe enough to send him to bed. He felt nauseated and vomited a small amount of greenish-yellow fluid. Shortly after he had a large, free evacuation. During the afternoon the patient was not especially uncomfortable, though he had some pain. Toward evening the nurse noted that the abdomen was a trifle distended and hard. She gave one and one-half quarts of a saline solution—three large teaspoonfuls of salt to a quart of water—which failed to give relief. Immediately the abdomen progressively increased in size. Becoming alarmed, the nurse gave another quart and a half of saline enema. This, too, failed to relieve, and the abdomen attained still greater dimensions. The patient vomited volumes of fluid of a very salty taste and containing fecal matter. Examination revealed a patient practically in collapse. Eserin 1/50 and atropin 1/60 hypodermically were given at once. The patient was turned on his left side. No more vomiting occurred, the abdomen rapidly fell to its normal proportions and the pulse dropped to 90. By midnight the patient was asleep and had a fairly easy night. The next afternoon, by enema, there was a large, loose movement in which the button came away.

139. **Mercury in Tuberculosis.**—The results obtained by Mosely in 33 cases are as follows: Marked improvement, 5 (15.15 per cent.); slight improvement, 11 (33.33 per cent.); stationary, 8 (24.24 per cent.); failed, 4 (12.12 per cent.); died, 5 (15.15 per cent.).

Iowa Medical Journal, Des Moines

August

140 *The Seamy Side of Surgery. G. G. Cottam, Rock Rapids.
141 The Training of the Surgeon. V. Knott, Sioux City.
142 The Management of Fractures. A. B. Bowen, Maquoketa.
143 Comprehensive Surgery. C. H. James, Centerville.
144 Treatment of Appendicitis. P. E. Sawyer, Sioux City.
145 The X-Rays as an Aid to the Physician in General Practise. R. D. Mason, Omaha, Neb.

140. Abstracted in THE JOURNAL, July 10, 1909, p. 139.

Washington Medical Annals

September

146 *Home Treatment of Insanity. P. C. Hunt, Washington.
147 Diseases of the Ear, Complicating Measles and Scarlatina. W. A. Wells, Washington.
148 Prognosis and Dietetic Management of Diabetes Mellitus. H. D. Fry, Washington.
149 *Arthrodesis for Flail-Foot. A. R. Shands, Washington.
150 Specimens of Urinary Calculi. H. A. Fowler, Washington.

146. **Insanity.**—In acute insanity the treatment employed by Hunt resolves itself into rest in bed, overfeeding, wet pack, fresh air and the occasional use of drugs, as may be indicated. The patient should be put to bed at once. Remove all sharp instruments, drugs, etc., have the windows so arranged that they may not be opened over six inches. The bed treatment impresses the patient with the fact that he is ill, and by further impressing the fact that the illness is curable, and by not occupying the patient's mind with games, odd jobs, etc., but by treating the disease as an ordinary illness, we obtain both physical and mental rest, and the result is a more frequent and speedy recovery. If motor excitement be present, it may require the temporary use of drugs, but it is much better for the patient to resort at once, if possible, to hydrotherapy. The warm bath produces diaphoresis, influences the circulation, lowers the blood pressure, causes the elimination of morbid products, renders the surface of the body less sensitive and produces a sedative action. The cold bath should be used only in cases that respond to the severe shock produced by the application of cold water to a large surface of the body, and it should be followed by energetic rubbing. It increases the nervous energy, stimulates the functions of the body and raises the blood pressure. The spray, either warm or cold, should follow the bath in suitable cases, for about five minutes. It is produced by a nozzle attached to a rubber tube which is connected with the spigot. The wet pack is very useful in excited patients, as well as in insomnia. It may be used either hot or cold, as the condition of the patient warrants, and may be continued for from twenty minutes to several hours. The wet pack also proves a good temporary restraint for excited patients. Insomnia is almost a constant feature of the acute forms of insanity. Drugs should be used only when indicated. Massage and gentle faradism are useful aids to nutrition. Overfeeding is necessary to restore the great waste of tissue going on in the system. As autointoxication is a frequent factor in the etiology of insanity, the alimentary canal should receive prompt and careful attention, the result at times of such attention being most gratifying.

149. **Arthrodesis for Flail-Foot.**—Shands' patient was a little girl, the victim of acute anterior poliomyelitis, both feet having been paralyzed; one foot remained completely useless and was a source of annoyance on account of its extreme flexibility—such as to make the term dangle-foot or flail-foot applicable. The operation of arthrodesis was done, after the method of Whitney. It consisted simply in opening the joint and denuding the articular surfaces—in this case those of the astragalus and the bones of the leg; the result was a beneficent ankylosis. The improvement in the girl's locomotion was very marked.

Northwest Medicine, Seattle

August

151 Relations of the Internal Secretions to Surgical Conditions. R. Park, Buffalo, N. Y.
152 A Correct Medical Discernment. J. L. Stewart, Boise, Idaho.
153 The Medical Profession of Idaho. J. L Stewart, Boise.
154 Problems of the Medical Profession of the Northwest. C. A Smith, Seattle.
155 The Complement-Deviation Test in Syphilis. R. C. Matson, Portland, Ore.

American Journal of Surgery, New York

September

156 *The Cancer Problem from a Surgical Viewpoint; with Possible Explanation of the Remarkable Freedom of the Duodenum from Cancer Invasion. R. W. Westbrook, New York City.
157 Excision of the Sternum for Sarcoma. A. E. Isaacs, New York.
158 Otitic Brain Abscess. W. S. Bryant, New York.
159 *Abscess of the Brain; Report of Two Cases with Death from Insufficient Exploration. W. H. Magie, Duluth, Minn.
160 Applications of Roentgen Rays in Diagnosis. E. W. Caldwell, New York.
161 *Fibroids and Pregnancy. C. L. Bonifield, Cincinnati.
162 Appendicostomy. J. M. Lynch, New York.

156. **The Cancer Problem.**—It is generally accepted that cancer develops especially in tissues exposed to long-continued irritation, and in scars, chronic ulcers, etc., of long standing. This so-called "precancerous" condition in the stomach is furnished by chronic gastric ulcer, and yet in 1,112 operations on the stomach and duodenum in one clinic there was but one instance of duodenal ulcer becoming carcinomatous. It has been very interesting to Westbrook to note, often, how gastric cancer will extend along the stomach to the pyloric ring, and then stop suddenly short in its progress in that direction, not at all involving the duodenum. The most striking difference in the involvement of the duodenum by cancer as compared with the stomach has received as yet no attention, beyond the statement of the fact, and an adequate explanation of this difference would be going a long way toward solving the cancer problem. Either it is a mistake that ulcer often forms a precancerous stage in the stomach, or there is lacking in the duodenum the essential cause which gives origin to cancer. There is nothing in the tissue formation of the stomach and of the duodenum to explain the great difference, and no one has shown that misplaced histologic cell-elements which might give rise to new growths are vastly more common in the stomach than in the duodenum. Westbrook asks whether this can be explained on the theory that cancer is due to a parasitic cause. It would seem that this would form a reasonable explanation, and that the intestinal secretions are the inhibiting cause which prevents the frequent occurrence of cancer in the upper intestinal tract.

159. Abstracted in THE JOURNAL, Jan. 9, 1909, p. 159.

161. Abstracted in THE JOURNAL, Jan. 16, 1909, p. 242.

Maryland Medical Journal, Baltimore

September

163 *Myasthenia Gravis (Asthenic Bulbospinal Paralysis). I. J. Spear, Baltimore.
164 The True Function of the Tuberculosis Nurse. M. E. Lent, Baltimore.
165 Roger Bacon, Linacre, Caius, Vesalius, Fallopius, Dover. H. M. Cohen, Baltimore.
166 Ideals of Health in Town and Country. C. O'Donovan, Baltimore.

163. **Myasthenia Gravis.**—Spear reports a typical case of myasthenia gravis, pursuing a characteristic course, beginning with transient weakness of the ocular muscles and muscles of mastication, later involving all the voluntary muscles, the respiratory and cardiac muscles, terminating in about four years with cardiac asthenia. There was also present a mediastinal tumor.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London

September 4

1 *Cancer in Man and Animals. E. F. Bashford.
2 Development of Physics. Sir J. J. Thomson.
3 *Experiences in the Treatment of Distal Paralysis by Nerve Anastomosis. A. H. Tubby.
4 A Possible Natural Enemy to the Mosquito. J. M. Atkinson.
5 *Delayed Chloroform Poisoning Treated with Dextrose: Recovery. A. A. Weir.
6 Vacuolation of Blood Platelets: An Experimental Proof of their Cellular Nature. H. C. Ross.
7 Hydroa Gestationis. N. M. Falkiner.
8 Syphilis with an Unusually Long Incubation Period. G. P. James.
9 Foreign Body in the Nose for Forty-four Years. D. L. Sewell.
10 Domiciliary Medical Treatment under the Poor-Law. Major Greenwood.

1. **Published also in the *Medical Record*,** New York, Sept. 4, 1909; abstracted in THE JOURNAL, Sept. 18, 1909.

3. **Nerve Anastomosis.**—The types of paralyses for which Tubby has performed anastomosis are (1) traumatic and (2) infantile paralysis. The total number of patients operated on is eight. These have been watched for a period of not less than 3 years since the operation. Of the 8 cases quoted, 2 were of traumatic origin, of which one patient recovered after complete severance of the nerve, and the other is showing steady progress toward recovery. Of the cases due to anterior poliomyelitis, 6 in number, in 4 there is distinct evidence of a more partial recovery of the muscles, but in 1 of these cases improvement has ceased for a year. In 2 others no clinical signs of regeneration are apparent, even after 4 years. In 1 of the latter cases operative exploration showed, however, that the external popliteal nerve was being regenerated centrifugally.

5. **Delayed Chloroform Poisoning.**—Weir's case presents several points of interest. The abdomen was opened and drained for an abscess which extended down into the pelvis. The anesthetic administered was chloroform, which was taken exceedingly well, the time occupied being about three-quarters of an hour. After the operation, the patient was restless and complained of a good deal of thirst, but vomited once only and that was twelve hours afterward. Saline solution was administered by rectum on account of the thirst. For forty-eight hours the patient seemed well, except for restlessness; the temperature was normal and the pulse good. On the following day, however, the restlessness had become a maniacal delirium, the patient screamed, threw the clothes about, tore off his dressings, and had to be placed under mechanical restraint. There was almost entire absence of vomiting. The urine showed diacetic acid when tested with liquor ferri perchloridi, and although the quantity of urine was not measured, it was judged by the nurse to be about normal. Rectal injections and sodium bicarbonate were continued, and a solution of glucose, half an ounce to half a pint of milk was administered by the nasal tube, and a 10 per cent. solution by the rectum. This was given once every four hours, and, in addition, a good supply of carbohydrate food. For the next twenty hours the patient went from bad to worse, the face became a rich plum color, the coma deepened, frothy saliva oozed from the mouth, and the prognosis seemed absolutely hopeless. Typical Cheyne-Stokes respiration was present, and the sweating was profuse. The pulse, however, remained good, and was never above 108 a minute. The patient retained everything given by the nasal tube and by rectum. After remaining in this desperate-looking condition for a few hours, he began to show a little improvement, the first sign being an attempt to move his head. Within six hours, in fact, the intellect was quite clear and the patient expressed a wish for some food. Recovery was perfect.

British Medical Journal, London

September 4

11 Educational Number.

11. **Educational Number.**—This issue is devoted entirely to medical education.

Journal of Tropical Medicine and Hygiene, London

August 16

12 *Bacterium anaërogenes* Isolated from Human Feces. J. M. Swan.
13 *Filaria (Microfilaria) philippinensis*. C. F. Craig.
14 Apparent Cure of Filarial Hematochyluria. J. R. McDill and W. B. Wherry.

Practitioner, London

August

15 *Chronic Ulceration of the Rectum. D'A. Power.
16 The Rôle Played by Diet in Bright's Disease. W. B. Warrington.
17 Report on 250 Cases of Spinal Analgesia by the Use of Stovain-Glucose Solution. L. McGavin, and G. Williams.
18 *The Treatment of Fractures of Long Bones. J. H. Pringle.
19 Acute Infective Endocarditis treated with a Vaccine Prepared from the Patient's own Blood and Ending in Recovery. A. F. R. Conder, and J. R. Collins.
20 Diagnosis of Permanent Mental Deficiency in Infancy and Childhood. C. P. La Page.
21 Medical Inspection and Treatment of School Children. C. Dukes.

22 Use of Thorium and Radium in Some Diseases of Pharynx and Larynx. L. M. Chesney.
23 The Prophylaxis of Aphasia. F. C. Coley.
24 Adventures with a Curette. R. Watson.

15. **Chronic Ulceration of Rectum.**—Power reports 9 cases—3 of ulcerative colitis, examples of the condition known as sporadic ulcerative colitis, which is an infective inflammation attacking all parts of the large intestine. It is not identical with dysentery either of the bacillary or amebic type, nor is it quite the same disease as asylum dysentery. There was no cause localizing the inflammation to the rectum in the first and third cases, except, perhaps, the changes occurring in connection with recent parturition. In the second case, the rectum had already been the seat of chronic inflammation, as was shown by the fistulas, and the patient was also suffering from Bright's disease. There were 3 cases of ulcerative colitis occurring in patients who had acquired syphilis. There was one case of chronic ulceration occurring after labor, one case each of anorectal syphiloma, gummatous ulceration, and malignant ulceration of the rectum. Power classifies chronic ulceration of the rectum as follows:

- Chronic ulceration of rectum.
  - Ulcerative colitis
    - Dysenteric. (Sporadic. / Epidemic.)
    - "Syphilitic."
    - Tuberculous.
    - Secondary to pelvic cellulitis.
  - Syphilitic. (Gummatous. / Anorectal syphiloma.)
  - Tuberculous.
  - Carcinomatous.

Considerable stress is laid on the part played by infective colitis in producing chronic inflammation of the rectum.

18. **Treatment of Fractures.**—Pringle favors the extension method in the treatment of fractures of long bone. In his experience the results obtained surpass those by any other method of treatment, operative or non-operative.

Australasian Medical Gazette, Sydney

July

25 Protection of our Frontiers from Invasion of Disease. J. H. L. Cumpston.
26 Prevention of Parasitic Anemia. A. J. Turner.
27 Ankylostomiasis Among Queensland Children. A. G. Salter.
28 Enlarged Prostate. W. Chisholm.
29 Successful Case of Strangulated Umbilical Hernia with Resection of a Piece of Ileum. C. E. Todd.
30 *Anesthetics. A. Aspinall.
31 *Heterophoria as a Cause of Intractable Headache. E. T. Smith.
32 Complicated Pelvic Hematocele, Successfully Treated by Hyperemia. M. A. Schallt.
33 Heart Block in Acute Rheumatism. J. M. Gill.

30. **Anesthetics.**—Aspinall presents a most admirable review of the history of anesthesia and discusses tersely, but well, the use and indications for the anesthetics now in use. In closing he emphasizes the following points: 1. Every breath taken by the patient should be felt or heard by the anesthetist. 2. The color should be continually observed and an explanation sought for any change in it. 3. The pulse should be felt regularly. 4. If in doubt as to the depth of anesthesia present, temporarily withdraw the anesthetic. 5. Never attempt to hurry the administration, and do everything quietly, so as not to attract the surgeon's attention and cause anxiety on his part. 6. Have everything ready in case of emergency. 7. Do not be impatient during the induction of anesthesia. 8. Watch the patient and not the operation.

31. **Heterophoria as Cause of Intractable Headache.**—A cautious central tenotomy of the right superior rectus was performed by Smith in this case. The day after the operation, for the first time for twelve months, the patient awoke free from headache. But it recurred next day and remained. A month later she had only one degree of hyperphoria, instead of two degrees. As the pain persisted, Smith did a small central tenotomy of the left inferior rectus. This, from the day after the operation till the present time, completely removed the headache, but gave rise to constant diplopia, which she had never been conscious of before, and an obvious vertical squint. To shut out the persistent second image, she kept her left eye generally closed (previously, closing one eye did not relieve the headache at all), and she became a bright cheerful woman, doing her housework and resuming her sewing. Subsequently, Smith remedied the vertical squint by a carefully performed advancement of the left inferior rectus, which, fortunately, just hit the happy medium and resulted in orthophoria, binocular single vision, and happiness.

British Journal of Children's Diseases, London

August

34 Congenital Heart Affections, Especially in Relation to Diagnosis. G. Carpenter.
35 *Treatment of Advanced Cases of Acute Diaphysitis. H. M. W. Gray.
36 *Acute Meningitis in Children. F. Tresilian.

35. **Treatment of Acute Diaphysitis.**—The case reported by Gray was a typical acute suppurative diaphysitis or osteomyelitis of the upper half of the shaft of the left tibia. The upper epiphysis and neighboring knee-joint were, so far as could be ascertained, free from disease. An incision, slightly internal to the crest of the tibia, was made from the upper limit to three-fourths of an inch below the lower limit of denudation of periosteum, down to the bone in its whole extent. The subperiosteal cavity was washed out, first with peroxid of hydrogen (10 per cent.) and then with saline solution. The periosteum, corresponding in extent with the lower three-fourth of an inch of the incision, which was adherent to bone and healthy, was elevated off the bone, which was then chiselled across at the lower end of the incision. The upper half of the tibia was then easily lifted out of its periosteal bed, as it was only very loosely adherent to the epiphyseal cartilage. The cavity thus made was carefully washed out as before, dried, and packed lightly with sterile gauze wrung out of peroxid of hydrogen (3 per cent.). The opening of the medullary cavity of the remaining part of the tibia was previously smeared over with Beck's bismuth paste, so as to prevent any possibly infective material from penetrating to the healthy medullary cavity of the lower part of the bone. The limb was then enveloped in sterile dressings and a moulded splint applied (made of plaster-of-Paris bandages soaked in biniodid of mercury, 1 in 2,000 solution).

The temperature fell to normal in a few hours. Three days later the child was anesthetized again and the gauze removed. The cavity was found to be clean and dry, free from pus. The catgut sutures were tied. Bismuth paste which oozed out between the stitches was lightly wiped away and the skin was carefully sutured with fine catgut. Dressings were applied and the limb placed again in the plaster splint. Small sinuses formed, one at the upper and one at the lower end of the wound. Through the upper sinus the greater part of the bismuth paste was gradually pushed out—as the periosteal cavity became filled with "granulation tissue" and bone. The discharge was a thin, honey-like fluid. At no time was there an ordinary purulent discharge. The lower sinus was found to be due to the presence of a thin flake of necrosed bone, which separated and was extruded during the sixth month. At the end of a month the patient was able to walk freely without pain. Thirteen months after operation she had perfect use of the limb, had no discomfort of any kind, and on examination, apart from the scar, one could make out scarcely any abnormality of the bone. On careful measurement from the upper margin of the internal tuberosity to the tip of the internal malleolus it was found that the affected tibia is one-fourth of an inch shorter than the other.

36. **Acute Meningitis.**—Tresilian reports four cases: The first case was one of tuberculous meningitis, which began in a hemiplegic form. The second was an ordinary case of posterior basic meningitis in an infant, which left behind it the very unusual sequel of complete deafness only. The next case was a typical and severe one of acute cerebrospinal meningitis. The fourth was a case of posterior basic meningitis.

Journal of Obstetrics and Gynecology of British Empire, London

August

37 *Sarcoma of the Ovaries. F. A. L. Lockhart.
38 Fibromyomata Uteri. E. McDonald.
39 *Urinary Fistulas in Women: Prophylaxis and Treatment. R. Worrall.
40 Peritonitis as a Complication of Fibroids Especially in Association with Torsion of the Pedicle; Report of an Illustrative Case. J. McGibbon.
41 Ruptured Tubal Gestation Twice in the Same Tube: Normal Pregnancy Intervening. M. G. Pearson.

37. **Ovarian Sarcoma.**—Lockhart has 65 cases of ovarian tumors in which operation was done during 20 years, and of these, 14 were of malignant nature. These were divided as follows: Sarcomata: right ovary 3, left ovary 2, double 2. Carcinomata: mixed sarcoma and carcinoma 1, papilloma malignum 1.

39. **Urinary Fistulas.**—Worrall reports the following cases: (1) Vesicocervico-vaginal fistula, hemorrhage into bladder; (2) ureteral fistula; (3) vesicouterо-vaginal fistula; (4) vesicourethro-vaginal fistula; (5) vesicocervico-vaginal fistula; (6) very large fistulas, vesicocervico-vaginal.

Annales de Médecine et Chirurgie Infantiles, Paris

August 15, XIII, No. 16, pp. 541-576

42 *Pathogenesis of Rachitis. P. Hutinel.
43 *Defective and Perverted Thyroid Functioning in Children. L. Concetti.

42. **Pathogenesis of Rachitis.**—Hutinel reports research on the bone marrow, bones and cartilage, the conclusions being that the disturbances in rachitis are due to an evolutionary dystrophy affecting the least resistant tissues. During the first three or four months of life all the tissues suffer in case of defective assimilation. But, as the child grows, certain organs acquire greater resistance, while others feel more the influence of the nutritional derangement. These dystrophies are particularly important during periods of intense nutritional activity, that is, during the first two years and in adolescence.

43. **Defective and Perverted Thyroid Functioning in Infants.**—Concetti ascribes to thyroid insufficiency many of the phenomena noted in young infants, such as a tendency to obesity, to transient edema, cold feet and hands, scanty and brittle hair, vasomotor disturbances, vomiting, somnolency and slight resistance to infections. With artificial feeding, these signs become more pronounced, with eczema, urticaria, tardy dentition, etc. It seems evident that nurslings receive in mother's milk some of the products of the mother's thyroid functioning. The physiologic hypothyroidism of the new-born may assume pathologic proportions; any derangement in thyroid functioning on the part of the mother or wet-nurse may lead to severe symptoms of hypothyroidism in the infant. In several instances in his experience infants became myxedematous when the mothers had goiter. In other cases, the healthy infants of healthy parents became myxedematous when they had a wet-nurse with goiter. All these children were cured with thyroid treatment and change of nurse. Experimental research with goats has confirmed, he asserts, the fact of transmission of thyroid secretion by the placenta and in the milk. He is convinced that in many cases the symptoms of thyroid insufficiency in infants have escaped detection or have been attributed to other causes or grouped in other syndromes. There is a promising field for study, he says, in this infantile disthyroidism and the prompt change for the better under thyroid treatment. Typical, complete forms are rare, but the *formes frustes* are encountered on every hand and have been hitherto classed as "lymphatism," "neuroarthritism," atrophy, rachitis, etc. They all show notable improvement and sometimes a rapid cure under correct thyroid treatment, as he has witnessed in many cases. His pupils are now examining infants in crèches, asylums, schools and dispensaries for signs suspicious of defective thyroid functioning, and are instituting thyroid treatment when possible. With the Wassermann test an excess or lack of thyroid secretion can be determined in animals, but the findings are less decisive in the clinic. In some cases the infants seem to be suffering from excessive thyroid functioning, or the deficiency and excess may alternate. The thyroid treatment should be given with caution. He does not give the details of his dosage, but says that he makes a point of treating the nursing mother also.

Archives des Maladies du Cœur, etc., Paris

August, II, No. 8, pp. 449-496

44 *Syphilitic Phlebitis. C. Achard and R. Demanche.
45 The Blood in Lead Colic. (Des altérations des globules rouges au cours de la colique de plomb.) N. Fiessinger and A. Peigney.

44. **Syphilitic Phlebitis.**—Achard's patient, a waiter 20 years old, presented swelling and pain in the left knee simulating phlegmasia, of abrupt onset, but explained by a history of possible syphilitic infection nearly three months before. There were also evidences of roseola and of secondary syphilitic nephritis, with pronounced albuminuria and edema. Under mercurial treatment the phlebitis and the edema subsided completely, but some albuminuria still persisted when the patient left the hospital about the seventh week.

Presse Médicale, Paris

August 25, XVII, No. 68, pp. 601-608

46 The Karyogamic Theory of the Origin of Cancer. (Problème du cancer et la biologie générale.) L. Hallion.
47 Cerebrospinal Meningitis. (Quelques particularités bactériologiques et cytologiques dans la méningite cérébro-spinale.) G. Fischer and P. Scherrer.
48 Tenotomy of Achilles Tendon. V. Veau.

August 28, No. 69, pp. 609-616

49 Apparatus or Electricity in Treatment of Peripheral Muscular Atrophy. (Mécanothérapie ou électrothérapie dans le traitement des atrophies musculaires périphériques.) E. Rochard and P. de Champtassin.
50 Pathogenesis of Phlegmons of the Hand. L. Imbert.

September 1, No. 70, pp. 617-624

51 Hysterectomy by Anterior Section of Cervix. (Quelques mots en faveur de l'hystérectomie par décollation antérieure.) T. de Martel.

Semaine Médicale, Paris

September 1, XXIX, No. 35, pp. 409-420

52 Combinations of Drugs in Therapeutics. (Des synergies médicamenteuses et de leur utilisation systématique en clinique.) M. Roch.
53 *Guaiac Test for Blood in Helminthiasis. (Réaction de Weber et trichocéphale.) J. Guiart and C. Garin.

53. **The Guaiac Blood Test and Helminthiasis.**—Guiart found the Weber reaction positive in thirteen cases in which the eggs of the trichocephalus were found in the stools, and eggs were never found without this positive reaction occurring sooner or later. The patients were on a diet that excluded all source of error from this cause, so that the conclusion seems inevitable that the trichocephalus induces hemorrhage in the intestines, the presence of occult blood being revealed by this sensitive test. This is of considerable practical importance, as the symptomatic value of the test thus depends on whether the patient is free from the trichocephalus or not. The findings are reliable only when the stool gives negative microscopic findings in regard to this parasite. This test for occult blood is frequently accepted as decisive for cancer of the stomach or intestine, but its differential value is annulled if the eggs of the trichocephalus are found in the stools, and statistics show, he says, that this parasite occurs in about 50 per cent. of the population. He has not found the reaction so constantly in case of presence of ascarides. The Weber test should never be accepted as decisive in case of positive findings unless the stools are examined under the microscope at the same time.

Archiv für Verdauungs-Krankheiten, Berlin

August, XV, No. 4, pp. 443-555

54 Importance of Dietetic and Therapeutic Measures even for Nervous Functional Dyspepsia. A. Schule.
55 *Value of Salomon Test in Diagnosis of Stomach Carcinoma. (Wert der Salomonschen Probe für die Frühdiagnose des Magenkarzinoms.) E. H. Goodman (Philadelphia).
56 Yoghurt and Its Indications. (Kritik des Yoghurt und die Indikationen für seine Anwendung.) E. Rosenberg.
57 *Use of Atropin Sulphate and Atropin Methylbromid in Diabetes Mellitus. (Einfluss von Atropinsulfat und Atropinmethyl-bromat "Merck" auf die Zuckerausscheidung bei Diabetes mellitus.) J. Rudisch (New York).

55. Practically the same article was published in the *University of Pennsylvania Medical Bulletin*, May, 1909, and abstracted in THE JOURNAL, July 3, 1909, page 78.

57. A similar article by this author was abstracted in THE JOURNAL, July 10, 1909, page 143.

Beiträge zur klinischen Chirurgie, Tübingen

July, LXIV, No. 1, pp. 1-279

58 Hernia of the Cecal Recess. (Eine neue pericoecale Hernie, die Hernie des Recessus coecalis.) A. Reich.
59 *Surgical Treatment of Retropharyngeal Abscess. F. Rösling.
60 *Experiences with Spinal Anesthesia in 600 Cases. (600 Lumbalanästhesien.) Meissner.
61 Isolated Fracture of the Semilunar Bone. (Der isolierte Bruch des Mondbeines.) H. Finsterer.
62 Transplantation of Bone to Remedy Defects in Long Bones. (Freie Knochentransplantation zur Deckung von Defekten langer Röhrenknochen.) H. Frankenstein.
63 Congenital Angioma in Relation to Deformities in Bony Frame of Face. (Zur Kasuistik der Deformitäten des Gesichtsschädels bei angeborener Angiombildung.) W. Wolf.

64 Acute Yellow Atrophy of Liver Consecutive to Suppurative Disease in Abdominal Cavity. (Die akute gelbe Leberatrophie als Folgeerscheinung eitriger Erkrankungen der Bauchhöhle.) J. Amberger.
65 Origin of Congenital Dislocation of Hip Joint. (Zur Lehre von der Entstehung der angeborenen Hüftverrenkung.) P. Graf.
66 *External and Internal Secretion Viewed by the Light of Diffuse Incorporated Stain. (Die äussere und innere Sekretion des gesunden und kranken Organismus im Lichte der "vitalen Färbung.") E. E. Goldmann.
67 Nail Extension in Treatment of Fractures. (Ueber Nagelextension.) M. Kirschner.

59. **Retropharyngeal Abscess.**—Rösling epitomizes 17 cases in which operation was by the Chiene technic, and extols its advantages. Recovery was prompt and complete in all but 3 cases in which the patients succumbed to the progress of advanced tuberculosis. He compares the outcome with this technic in the hands of various surgeons with the outcome when the Burkhardt or other technics were followed, the results sustaining his assertions, he declares, in regard to the superiority of the Chiene method.

60. **Spinal Anesthesia in 600 Cases.**—Meissner remarks that the recent improvements in the methods of local anesthesia will restrict the field of spinal anesthesia more and more as, even in the hands of experts, it cannot be regarded as free from danger, although it has proved useful when strictly indicated. In 15 of the 600 cases in which spinal anesthesia has been used at von Bruns' clinic at Tübingen, the spine was deformed, the ligaments ossified or the patient was obese to such an extent that it proved impossible to introduce the needle. By using minute amounts of the anesthetic and refraining from raising the pelvis, the anesthesia proved sufficient for operations below the umbilicus, free from threatening mishaps while the by-effects and after-effects were much reduced.

66. **Study of the Vital Processes by Incorporation of a Stain.**—Goldmann injected white mice subcutaneously with 1 c.c. of a 1 per cent. solution of pyrrhol blue and obtained most interesting findings with this "vital staining" which did not seem to injure the health of the animals in the least, although the illustrations show that they had "the blues" to an unprecedented extent. The stain was attracted to different tissues in different ways, and revealed vital processes of internal secretion, as well as external, throwing light on many hitherto obscure points, especially in the gravid animals. One of the facts learned was the presence of a certain granulated cell in the connective-tissue cell wherever important metabolic processes were taking place. This cell shares with the stellate liver cells and some others the property of taking up and binding substances dissolved in the blood and holding them a long time.

Berliner klinische Wochenschrift, Berlin

August 30, XLVI, No. 35, pp. 1597-1636

68 Surgical Treatment of Tuberculosis of Nasal Septum. (Behandlung der Nasenscheidewandtuberkulose.) A. Onodi.
69 Case of Tumor in Third Ventricle of the Brain. (Fall von Hirntumor.) A. Piazza.
70 Resection of Right and Part of Left Upper Jaw. (Resektion des Oberkiefers.) M. Albricht.
71 New Spectra of the Blood. A. de Dominicis.
72 Central Dislocation of Hip Joint. A. Heschelln and E. Schapiro.
73 *Threatening Collapse after Injection of Diphtheria Antitoxin. (Gefahrdrohende Dyspnoe mit Kollaps nach Seruminjektion.) A. de Bessche.
74 Hemolysis with Paroxysmal Hemoglobinuria. A. A. Hymans van den Bergh.
75 Improved Technic for Wassermann Reaction. J. A. Finkelstein.

73. **Threatening Collapse After Injection of Diphtheria Antitoxin.**—A young physician describes the collapse in his own person. It occurred in less than half an hour after a prophylactic injection of 1,000 units of antitoxin. The threatening symptoms lasted nearly three hours and then gradually subsided so that he had quite recovered by the next day. He had noticed from childhood that the smell of hor s produced discomfort and symptoms suggesting hay fever; they came on when he went into a stable or was driving. Cows and other domestic animals did not have this effect, and he never had hay fever or asthma. It seems evident that the collapse was due to a special hypersusceptibility to horse serum, and this view is confirmed by the fact that a kind of immunity persisted for three months afterward and then gradually subsided.

Correspondenz-Blatt für Schweizer Aerzte, Basle

August 15, XXXIX, No. 16, pp. 545-576

76 *Sahli's Desmoid Reaction as Practical Test of Stomach Functioning and for Control of Therapeutic Measures. R. Nadler.
77 *Treatment of Asphyxia in New-born Infant. (Ein neues Verfahren bei der Behandlung des Scheintodes der Neugeborenen.) Volland.

September 1, No. 17, pp. 577-616

78 *Aims, Means and Problems of Research on Endemic Goiter. (Erforschung des endemischen Kropfes.) W. Kolle.
79 Defects in Skull of New-born Infants. (Wesen und Bedeutung der kraniellen Ossifikationsdefekte Neugeborener.) E. Wieland.
80 Masked Chlorosis. (Ueber "larvierte" Chlorose.) F. Seiler.

76. **Simple, Practicable Tests of Stomach Functioning.**—Nadler extols the simplicity, reliability and diagnostic importance of Sahli's desmoid test of stomach functioning; this is merely the ingestion of a pill of methylene blue around which is drawn tight a tiny square of thin rubber tissue tied with catgut. As the catgut dissolves in the stomach, the rubber springs open and throws out the pill. A positive reaction indicates that the gastric juice is normal or with an excess of acid or pepsin or both. A negative reaction indicates little or no acid or pepsin or else excessive motility. He gives the patient the blue pill tied up in its bag, and also four half-ounce bottles, the corks marked, respectively, I, II, III, IV. The pill is taken with the noon meal and the urine, voided at three-hour intervals thereafter, is poured in turn into the first three bottles, and the urine voided next morning in the fourth. After this the patient eats a Boas-Ewald test breakfast at home, and then with the four bottles he returns to the doctor's office. If the first bottle shows a positive reaction, the gastric juice is normal or hyperacid; the latter condition is diagnosed by the subsidence of disturbances on administration of an alkali. If the reaction is positive only in the second or third bottles, the acidity is not excessive and an alkali will not do so good service as hydrochloric acid or pepsin. In case of a negative reaction he siphons out the stomach content if the patient consents; if not, he gives hydrochloric acid and a pill of iodoform. A positive reaction in three or six hours indicates merely lack of hydrochloric acid. If the reaction is still negative, he gives pepsin with the hydrochloric acid and a methylene blue pill. The urine is always green after this, unless there is excessive motility, and if the gastric disturbances have then subsided the assumption is that the trouble is merely a lack of pepsin or excessive motility. If the gastric disturbances persist, he omits the hydrochloric acid; if there is merely a lack of pepsin, the urine next day will give the iodin reaction. If the disturbances still continue, notwithstanding the ingestion of hydrochloric acid and pepsin, the trouble may be due to hypermotility, and the salol test will decide the matter, especially with Huber's modification. With this technic the patients can see for themselves the secretory anomalies and therapeutic results, and the whole procedure has a tranquilizing effect in nervous gastric disturbances.

77. **Simplified Method of Treating Asphyxia in New-Born Infants.**—Volland had just delivered a woman after difficult labor and the child was in livid asphyxia. There was no one to assist him, and he had to act quickly and alone. Without attempting to cut the cord he set the infant up against the inside of the mother's thigh and took hold of it as for Schultze swinging, but he did not lift the child more than just enough to let it hang by its whole weight from his hands and then set it down again, pressing with his thumbs, the mother's thigh meanwhile offering the counter support for the pressure, which simulated natural expiration. He repeated this lifting and pressure rhythmically and soon heard the child's cry. He then attended to the umbilical cord. The advantages of this procedure are that no precious time is lost, the child is not chilled, while the expiration rhythm can be made to correspond with the natural tempo and the maneuver is free from the dangers of Schultze swinging and other technics, while it is much less fatiguing for the obstetrician.

78. **Endemic Goiter.**—Kolle states that 6 or 7 per cent. of the recruits in the Swiss army each year present a goiter, and that the proportion of cretins and goitrous individuals is about as high in the Alpine regions surrounding Switzerland

proper. In certain towns in Switzerland from 80 to 90 per cent. of the children were found goitrous in 1908, the same proportion that was recorded in 1886. He adds that the thyroid is always found unusually large in the cadavers in Berne and other foci of endemic goiter, and the same is observed in domestic animals, especially in dogs. The evidence seems to incriminate the water, he reiterates, either as the bearer of some living virus or some chemical substance affecting the thyroid gland injuriously. In two endemic foci the tendency to goiter seemed to disappear when a new source for the water supply was utilized. He urges the medical profession to pay special attention to the influence in this line of boiling the water. Laborious research to isolate some special substance from the goitrous thyroid or the stools or to immunize against goiter has proved disappointing to date, as also all experiments for direct transmission of goiter to animals, but this research has cleared the way for future work, and he urges all the members of the profession in Switzerland to preach the necessity for individual prophylaxis by boiling or filtering the drinking water and for public works to provide an unobjectionable water supply.

Deutsche medizinische Wochenschrift, Berlin

August 26, XXXV, No. 34, pp. 1463-1504

81 *Pathology and Treatment of Disturbances in the Circulation in the Mesenteric Vessels. (Zirkulationsstörungen in den Mesenterialgefässen.) A. Neumann.
82 *Test for Blood. (Verfahren zum Nachweise von Blut.) J. v. Kossa.
83 *Tests for Bile Pigment in Urine. (Neue Gallenfarbstoffreaktionen im Harn.) A. v. Torday and A. Klier.
84 *Diagnosis of Functional Heart Disturbances. (Beitrag zur funktionellen Herzdiagnostik.) S. v. Ritook.
85 *Orthostatic Albuminuria Due to Curvature of the Spine? (Zur Frage der lordotischen Albuminurie.) B. Vas.
86 Treatment of Gunshot Wounds of the Lungs. (Behandlung der Schussverletzungen der Lungen.) S. Sandor.
87 True Congenital Homosexuality and Pseudohomosexuality. P. Nacke.
88 *Operative Treatment of Hay Fever. (Operative Behandlung des Heufiebers.) E. Blos.
89 Improved Technic for the Wassermann Reaction. N. Popowski.
90 Immunization of Rats and Mice against Rabies with Normal Nerve Substance, and Action of Carbolic Acid on Rabies Virus. C. Fermi.

81. **Thrombosis in the Mesenteric Vessels.**—Neumann has encountered five cases of a syndrome diagnosed as due to embolism or thrombosis of the mesenteric arteries or veins. Only one of his patients presented the entire quintette of signs that point to this affection, namely, a source for the embolism; abdominal colic; functional disturbance in the digestive tract; tympanites and palpation of bunches between the sheets of the mesentery which can be only engorged blood-vessels. A source for the embolism or a predisposition to thrombosis was discovered in 58 per cent. of 96 cases on record; colic was observed in 84 per cent.; functional intestinal disturbances in 86 per cent., while the complete picture of mechanical ileus was observed in only 14 per cent. of 63 cases in which the mesenteric arteries were obstructed and in 56 per cent. of the 31 cases in which the veins were involved. Admixture of blood in stools or vomit was observed in half the cases. In fully 75 per cent. of the cases only 3 of the above symptoms were evident. In one of his personal cases an anemic infarct was the cause of the trouble and this is the sixth case on record in which recovery followed resection of the part of the intestine involved. In 2 other patients, the presumptive diagnosis of obstruction of mesenteric vessels was shown to be erroneous at the operation. In treatment it is well to bear in mind that although in rare cases the intestinal infarct may be spontaneously absorbed, yet the serious secondary disturbances justify a prompt laparotomy in every case in which obstruction of the mesenteric vessels is suspected. He advises resection with primary union of the stumps, even if a long stretch has to be removed. He resected 9 feet of small intestine in a youth eight years ago, on account of volvulus, and the patient is still in good health. Extensive resection has as good prospects with mesenteric circulatory disturbances as with volvulus.

82. **Test for Blood.**—Kossa states that the technic which he describes is very sensitive, surpassing other tests in this respect, while it is simple and rapid. It is based on the principle that blood in an extremely diluted watery solution can be flaked out if some substance is added which reduces the solubility of blood in water. If, for example, 5 c.c. of defibrinated dog blood is mixed with 10 liters of distilled water it forms a 5 to 10,000 solution. To 10 c.c. of this solution 10 c.c. of 90 per cent. alcohol is added and the two fluids are mixed by gently swinging the test-tube, not shaking it; 5 c.c. of chloroform is then added and mixed in this same way. At the junction of the water and chloroform the blood shows as a precipitate of small red flakes. They show up better against a white background. The test is modified a little for urine; 10 c.c. of urine is diluted with the same amount of distilled water, then mixed with 5 c.c. of 90 per cent. alcohol; 5 c.c. of chloroform is then added and the whole is mixed by gently swinging the tube. It is then set aside to settle. If there is much blood a pink ring forms at the junction of the fluids. If not the supernatant fluid is decanted and a few more cubic centimeters of alcohol are added, when the pink flakes of blood become more apparent. If there is still doubt as to the outcome, the supernatant fluid is again decanted and a little diluted potash and one or two drops of yellow ammonium sulphid are added and the fluid is examined with the spectroscope. The lines show up better if the test-tube is held over a white background and the fluid examined from above, vertically. Any albumin present may flake out, but it is not red, and the physiologic elements of the urine are not precipitated.

83. **Bile Pigment Reaction in the Urine.**—Torday states that in examining the gastric juice of a jaundiced patient he obtained a red discoloration reaction with methyl violet instead of the expected blue stain of free hydrochloric acid. Study of this reaction shows that it is the result of admixture of bile pigment. He has utilized this reaction as a very sensitive test for the presence of bile pigment, especially in the urine. Comparison of this test with others in vogue showed that it gave positive findings with such minute proportions of bile pigment in the urine that the other tests were negative.

84. **Functional Diagnosis of the Heart Action.**—Ritook here describes comparative tests of the heart functioning by the Strasburger and v. Recklinghausen technics and v. Koranyi's method. The latter is based on the fact that the composition of the urine is influenced by the rapidity of the circulation. When the circulation becomes sluggish, as in case of failing compensation of heart defects, the elimination of chlorids suffers first and most, and when the circulation starts up again the elimination of chlorids increases first and most rapidly. As the freezing-point of the urine is the measure of the molecular concentration, the freezing-point divided by the chlorid content gives a quotient which rises and falls as the circulation is sluggish or rapid. The careful application of these methods reported confirms the value of the Koranyi quotient as an index of the functional capacity of the heart, especially when the person is put on a test regimen: supper at 6 p. m.; urine voided at 12 and again at 6 a. m., when 100 gm. of milk is ingested and urine is again voided at intervals of 90 minutes. Examination of the different portions of urine under these conditions gives a uniform basis for comparison.

85. **Orthostatic Albuminuria.**—Vas has examined 150 girls between the ages of 9 and 14 to determine the influence of curvature of the spine on orthostatic albuminuria. His findings confirm those of Jehle, mentioned in THE JOURNAL, Feb. 27, 1909, page 740, except they show that curvature of the spine is not the exclusive cause of orthostatic albuminuria, although it is an important factor in many cases by its interference with the circulation in the kidneys.

88. **Operative Treatment of Hay Fever.**—Blos reports three cases in which he cured the tendency to hay fever by resecting the anterior ethmoidal nerve on both sides to induce permanent anesthesia of the mucosa of the anterior part of the nose. The nerve was resected under chloroform or with local anesthesia plus morphin or with local anesthesia alone.

Fortschritte der Medizin, Leipsic

July 20, XXVII, No. 20, pp. 753-784

91 Mongoloid Idiocy. Meltzer.

August 10, No. 22, pp. 817-864

92 *Pathogenesis of Rachitis. P. Sittler.

93 *Influence of the Ductless Glands on Immunity to Infections and Intoxications. (Einfluss der Blutdrüsen auf die Immunität gegen Infektionen und Intoxikationen.) Lorand. Commenced in No. 21.

92. **Pathogenesis of Rachitis.**—Sittler declares that rachitis occurs most frequently and in its severest form among bottle-fed children receiving too large amounts of carbohydrates, especially flour. Incipient rachitis can be cured by dropping the flour from the diet. The limits of injury from the flour and carbohydrates vary widely in different children.

93. **Influence of the Ductless Glands on Immunity to Infections and Intoxications.**—Lorand presents arguments to sustain the assumption that immunity to infections and intoxications depends on the possession of well-functioning ductless glands. They protect against factors that tend to shorten life, and may afford a more rational basis for the life expectancy in insurance. He cites as the most important causes that affect these glands and reduce the resistance to infections and intoxications, insufficient food, chilling, worry and sorrow, although all other factors detrimental to personal hygiene may cooperate. This assumption explains why children are so exposed to infectious diseases as these glands are yet imperfectly developed, while in the aged they have undergone senile modifications.

Medizinische Klinik, Berlin

August 22, V, No. 34, pp. 1255-1290

94 *Therapeutic Hypnosis. (Ueber Hypnosebehandlung.) T. Becker.
95 Resisting Power of Red Corpuscles and Action of Iron and Arsenic. (Ueber die "Resistenz" der roten Blutkörperchen und die Wirkung von Eisen und Arsen.) A. Strasser and F. Neumann.
96 Trional Poisoning. Weyert.
97 Favorable Experiences with Goldschmidt's Endoscopy of Posterior Urethra. J. Heller.
98 Operative Treatment of Deltoid Paralysis. K. Lengfellner and F. Frohse.
99 Treatment of Hyperhidrosis. K. Gerson.
100 Physiologic Action of Carbonated Baths. (Neue Untersuchungen über die physiologische Wirkung der Kohlensäuregasbäder.) L. Fellner.

94. **Therapeutic Hypnosis.**—Becker reports successful application of hypnosis in a number of cases, but he never applies this technic until after absolute failure of all other measures. He does not induce the hypnosis by sensory means, but sits near the patient who is reclining on a sofa in a quiet room, he places two fingers on each eye, and suggests tranquil sleep by telling the patient to lie quiet, relax and rest. In a short time the hypnotic sleep is complete, with catalepsy. This phase is the most propitious for therapeutic suggestion. He insists that there is no mystical explanation of the condition, the whole being a psychophysical process distinguished merely by the acceptance of the suggestion while the inhibiting critical counter-suggestions are not aroused. As functional morbid phenomena are frequently associated with organic disorders, and as these functional symptoms may be the cause of the main discomfort, the therapeutic hypnosis is thus liable to benefit even in the organic cases. The psychogenic phenomena once banished, the patient pays no attention to the persisting organic disturbances and may be restored to comparatively satisfactory health. This is frequently the explanation of the benefit from a trip to a health resort. He cites a few cases in detail to show his exact method and its results. Traumatic neurasthenia frequently resists this therapeutic hypnosis and may recur after a transient improvement; the outlook is more favorable in cases of dread and phobias, obsessions, and in sexual weakness and enuresis of psychogenic origin.

Münchener medizinische Wochenschrift

August 31, LVI, No. 35, pp. 1769-1824

101 Does the Side-Chain Theory Conflict with Actual Facts? (Ist die Ehrlichsche Seitenkettentheorie mit den tatsächlichen Verhältnissen vereinbar?) I. Bang and J. Forssman.
102 *Experimental Research to Provide Basis for Intra-arterial Anesthesia. (Experimentelle Grundlagen der arteriellen Anästhesie.) W. A. v. Oppel.
103 "Heart Defect Cells" in the Urine. (Ueber "Herzfehlerzellen" im Harne.) A. Bittorf.
104 Verrucous Form of Skin Tuberculosis in Coal Miners. (Ueber die bei Bergleuten in Kohlenbergwerken beobachtete verruköse Form der Hauttuberkulose.) J. Fabry.
105 *Gynecologic Peritonitis. W. Hagen.
106 Lactic Acid Therapy in Gastrointestinal and Metabolic Disturbances. (Wirkung des in der Joghurtmilch enthaltenen Milchsäurebazillus und die therapeutische Verwendung der Joghurtmilch bei Magen-, Darm- und Stoffwechselerkrankungen.) A. Ohly.
107 Four Cases of Word Blindness in One Family. (4 Fälle von kongenitale Wortblindheit in einer Familie.) E. Plate.
108 Application of Cold to Back of Neck for Epistaxis. (Kälteapplikation auf den Nacken bei Nasenblutungen.) A. Jurasz.
109 Infant Consultations at Weissenburg. (Tätigkeit der Säuglingsfürsorgestelle in Weissenburg i. B. für das Jahr 1908.) H. Doerfler.
110 History of Introduction of Salicylic Acid into Treatment of Acute Articular Rheumatism. (Einführung der Salizylsäure in die Therapie des akuten Gelenkrheumatismus.) O. Meltzer.

102. **Intra-Arterial Anesthesia.**—Oppel is convinced that local anesthesia will finally require an intra-arterial technic before it can be regarded as perfected. As a basis for research in this line, he reports experiments with cocain injected into the abdominal aorta and the femoral and carotid arteries. His technic is somewhat similar to that of Bier's venous anesthesia, illustrated in THE JOURNAL, May 1, 1909, page 1466, only he made the injection into the artery instead of a vein, thus going with the blood stream instead of against it, and not having to contend with the valves in the veins. One fact has been learned from this research, namely, that the fatal dose is eight or ten times as large when injected into an artery. It is evident that the broader the area of ramification the lesser the toxicity as the cocain is neutralized in an extensive arteriocapillary field like that of the abdominal aorta. Another Russian, Goyanes, has already successfully applied the intra-arterial technic in two clinical cases.

105. **Gynecologic Peritonitis.**—Hagen calls attention to the peculiarly mild nature of peritonitis when it originates merely from a local chemico-toxic process, such as results from the gradual spread of the inflammation from a suppurative affection of the ovaries or tubes which has been established for some time. As the pus germs find their way through the lymphatics to the peritoneum, the latter is enabled to summon its defensive forces to repel this gradual invasion. The symptoms may be tempestuous at first, but the peritonitis is not suppurative; it is merely a typical chemical peritonitis, accompanied by tympanites, but without rigidity of the abdominal walls. Palpation of the genitalia is easy, but very painful; it early reveals the source of the trouble. Another aid in the differentiation of this comparatively mild form of gynecologic peritonitis is that the onset so often coincides with the menses when the infection is of gonorrheal origin. Complete repose and other appropriate measures for expectant treatment generally suffice. He was obliged to operate only in two out of the fifteen cases in this category in his experience during the last few years. In all other forms of peritonitis in women, puerperal, from perforation, etc., the ordinary surgical principles of prompt intervention prevail, but this local chemico-toxic process permits temporizing. The acute process subsides relatively soon and order returns, but relics of the extinct chemical inflammation are sometimes found, in operating for a pyosalpinx, in the form of multiple, serous peritoneal cysts or adhesions even in parts of the abdomen remote from the uterus.

Wiener klinische Wochenschrift, Vienna

August 26, XXII, No. 34, pp. 1171-1198

111 Antitrypsin Content of Infant's Serum. (Ueber den Antitrypsingehalt des Serums beim Säugling.) A. v. Reuss.
112 Heat from Electric Current in Treatment of Gonorrhea. (Verwendung von Thermopenetration in der Gonorrhoetherapie.) E. Eitner.
113 Etiologic Connection between Lupus Erythematodes and Tuberculosis. K. Ullmann.
114 Phenomena of Anaphylaxis in Psoriasis. (Ueberempfindlichkeit bei Psoriasis vulgaris.) J. Sellei.
115 *Clinical Importance of Iodin Reaction of the Intestinal Flora. (Klinische Bedeutung der Jodreaktion der Darmflora bei verschiedenen Verdauungskrankheiten.) A. Rodella.

September 2, No. 35, pp. 1199-1226

116 The Operability of a Rectal Carcinoma Dependent on its Clinical Course rather than on its Shape and Structure. A. Zinner.
117 *Present Status of Tendon Transplantation. (Der heutige Stand der Sehnentransplantation.) G. Hohmann.
118 Plexiform Angioma of the Brain plus Tuberculous Meningitis. (Zur Kasuistik kombinierter Hirnaffectionen.) F. Ranzel.

115. **The Diagnostic Iodin Reaction in the Intestinal Flora.**—Rodella refers to the staining reaction of bacteria in the stool which has been proposed as a means of differentiating them. His experience has shown that it is of little value for differentiating species, but that it is important as an index of

conditions in the intestines. A particle of stool on the object glass is mixed with the official compound solution of iodin and examined under the microscope. There is a distinct granulose reaction in the bacteria present when the digestion of starch or its absorption is interfered with. With a pancreatic affection the flora is strongly iodin positive. This iodin reaction is not only a more sensitive test for the digestion of carbohydrates than microscopic discoloration of the stool with iodin, but it also affords information in regard to the etiology and topography of various digestive disturbances, as he describes in detail.

117. **Present Status of Tendon Transplantation.**—Hohmann here reports the experiences at Lange's clinic at Munich with tendon transplantation, with twenty-six illustrations and discussion of the preferable technic. One of the impediments to fine functional results is the tendency to adhesions after the transplantation, and he gives directions how to avoid this, especially by making a canal for the transplanted muscle through the subcutaneous adipose tissue instead of below it. The results on the whole are encouraging and promise important progress in this line.

Zentralblatt für Chirurgie, Leipsic

August 28, XXXVI, No. 35, pp. 1193-1224

119 Improved Technic for Goiter Operations. (Die Knopflochverlagerung des Kropfrestes.) F. Hofmeister.
120 *Operative Mobilization of the Knee. (Operative Mobilisierung des Kniegelenks.) R. Klapp.

120. **Mobilization of Knee.**—Klapp declares that the problem of mobilizing the knee by an operation has not yet been effectually solved. Interposition of soft parts, after breaking up the ankylosis, mobilizes the knee, but does not make it stable. It should be capable of weight-bearing, and he thinks that this can best be accomplished by excising a wedge from the epiphysis of the femur. The wedge forms an angle of nearly 90 degrees, and is cut out entirely across the femur, as he shows in an illustration. The knee is bent beyond a right angle to the extreme limit and is held thus for a few minutes to correct the tension of the soft parts; then it is held at a right angle while the wedge is excised, the aim being to retain the connection with the tibia without modification. After the resection he nails the lower part to the upper stump, removing the nail six days later. A plaster cast is applied extending to the ankle. It is cut to the knee from the rear by the end of a week, to permit some movement, and is removed by the end of the second week. The movements are painful at first. The soft parts are passively stretched after the fourth week, not by massage, but by elastic traction; the patient sits on a chair and the leg is fastened by a rubber band to the leg of the chair. As no ligaments are severed there is not the least lateral movement. He has thus operated on two patients; one is already able to make active movements of more than 45 degrees, with a little larger passive range. The other has only recently been operated on.

Zentralblatt für Gynäkologie, Leipsic

August 28, XXXIII, No. 35, pp. 1217-1248

121 Differentiation of Hemolytic Streptococci. F. Fromme.
122 Acute Thyroidism as Complication after a Gynecologic Prolapse Operation. K. Himmelheber.
123 *Pathology of Female Sexual Organs in Relation to Wage-earning Work. (Pathologie der weiblichen Geschlechtsorgane in Beziehung zur Arbeit.) L. M. Bossi.
124 Bilateral Herpes Zoster. (Doppelseitigkeit des Herpes zoster faciei und der Fall Kalb.) Kocks.
125 *Syphilis Affecting the Kidneys during Pregnancy and Confinement. (Nierensyphilis in Schwangerschaft und Wochenbett.) M. Hirsch.

123. A similar article by this author was abstracted in THE JOURNAL, July 10, page 157.

125. **Renal Syphilis During Pregnancy and Confinement.**—Hirsch has recently reported three cases of renal syphilis, one being in a pregnant woman, and he here gives the details of this last case to warn obstetricians to be on the lookout for this syndrome. His patient was a woman of 35 with albuminuria and edematous swelling after the fifth month of her last pregnancy four years before. The kidney disturbances subsided for a time, but then there was pain in the right kidney region, with tenesmus but little urine. She grew thin and the kidney disturbances increased during her last pregnancy, which was complicated by hydrocephalus and ascites in the child. Notwithstanding the painful tumor in the right kidney region, there were no tube-casts, but merely epithelial cells in the urine. After delivery the patient was given potassium iodid for four weeks and all the symptoms disappeared; there has been no recurrence since. The husband recently applied for relief from violent headache in the vertex, which had resisted ordinary measures for five years. He also was given potassium iodid, and by the end of the fifth bottle was completely cured. Hirsch affirms therefore that a unilateral painful diffuse tumor in the kidney, with reduction in the amount of urine, but with large albumin content, speaks for a syphilitic affection demanding potassium iodid. It is well to bear this in mind in every case in which the ordinary treatment of assumed pregnancy kidney is not promptly effectual after delivery.

Gazzetta degli Ospedali e delle Cliniche, Milan

August 26, XXX, No. 102, pp. 1073-1080

126 Helminthiasis in Relation to Intestinal Tolerance. (L'elmintiasi in rapporto alla tolleranza intestinale.) T. Oreste.

Policlinico, Rome

August 29, XVI, No. 35, pp. 1093-1124

127 Malta Fever Infection in Palermo Goats. (L'infezione da "micrococcus melitensis" nelle capre di Palermo.) G. Palumbo.
128 Hemorrhage in Second Stage of Labor. (L'emorragia del secondamento.) G. Massimi.

August, Surgical Section, No. 8, pp. 333-389

129 *Surgery of the Pancreas. Connection between Pancreatitis and Gall-Stones. L. Cappelli. Commenced in No. 7.
130 Origin and Treatment of Anterior Luxation of the Astragalus. M. Fasano.
131 *Mental Manifestations with Tumors of the Brain and its Various Convolutions. (Studio clinico-statistico intorno alla manifestazioni psichiche nei tumore del cervello.) A. Osti. Commenced in No. 7.

August, Medical Section, No. 8, pp. 337-380

132 Experimental Research on Necrosis of the Aorta under Influence of Suprarenal Preparations. (Studio delle necrosi aortiche da adrenalina.) G. Egidi.
133 *Addison's Disease and the Internal Secretions. E. Leonardi.
134 *The Blood in Exophthalmic Goiter. (Ulteriore contributo alla ematologia del morbi di Flaiani-Basedow.) O. Ciuffini. Commenced in No. 7.
135 *Variations in Viscosity of Blood as Early Sign of Cardiac Insufficiency. (Sulla diagnosi precoce della insufficienza cardiaca.) C. Rubino.

129. **Surgery of the Pancreas.** Cappelli emphasizes the importance of the lymphatic connection between the bile passages and the head of the pancreas. A group of lymphatics from the gall-bladder unite in the head of the pancreas. This demonstrates the importance in treatment of chronic pancreatitis of draining the hepatic duct after removal of the gall-bladder as the most rational means of curing the pancreatic trouble. In acute hemorrhagic pancreatitis the gravity of the affection is due to the necrotic destruction of the pancreas rather than to the hemorrhage. Chronic pancreatitis consecutive to gall-stones is a well-individualized morbid entity, and the cure after effectual drainage of the bile passages proves its dependence on the lithiasis. The operation is more successful the earlier it is done, before glycosuria reveals disturbance in the internal secretion.

131. **Mental Disturbances with Brain Tumors.**—Osti concludes his study of this subject with summaries of 54 cases from the literature to confirm his assertion that early psychic symptoms, predominating over all the other symptoms of a tumor, are of the greatest importance for the diagnosis of a tumor in the frontal lobe.

133. **Addison's Disease and the Internal Secretions.**—Leonardi reports the clinical and autopsy findings in three cases; the morbid changes in the suprarenals were accompanied by corresponding changes in the other glands with an internal secretion, the thyroid, hypophysis and spleen—all of these were hypertrophied with evidence of hyperfunctioning. He does not regard Addison's disease as due to a single gland but to several participating in the process. The first symptom in one patient was tremor of the arms, probably the result of professional exposure to electric currents, the man's work being done under an electric light of between 15,000 and 20,000 candle-power. The effect of the Roentgen rays on glandular organs suggests that the light here may have affected the cervical sympathetic, the thyroid and the hypophysis.

Later the process seems to have extended to the abdominal sympathetic and suprarenals. In another case, atrophy of the ovaries followed a pregnancy with premature menopause. Calcareous degeneration of the thyroid followed, with tuberculous infection later and fulminating suprarenal symptoms. The diseased suprarenals could not obtain help from the ovaries and thyroid and there was merely slight hyperfunctioning of the hypophysis as a defensive reaction. In the three cases, patients in the last stages of Addison's disease recovered their energy and the bronzing subsided under thyroid treatment. The thyroid was already modified and was inadequate to supplant the diseased suprarenals, but it only required slight additional aid from without to be able to counteract temporarily the destructive process in the suprarenals. The disease, the course, the outcome, the histologic findings, the research in the experimental field, all sustain the assumption that Addison's disease in its complete form is a general affection of the entire great sympathetic system.

134. **Exophthalmic Goiter.**—Ciuffini tabulates the details in four cases of exophthalmic goiter after strumectomy with special reference to the blood picture.

135. **Early Diagnosis of Cardiac Insufficiency.**—Rubino states that the viscosity of the defibrinated blood becomes much increased as one of the earliest signs of cardiac insufficiency. He offers a plausible explanation of this fact and suggests its importance for the early diagnosis.

Riforma Medica, Naples

August 30, XXV, No. 35, pp. 953-980

136 Agglutinating Power of Tuberculous Serum on Malta Fever Germ. (Sul potere agglutinante del siero dei tubercolotici sul cocco melitense.) A. Evangelista.

Hospitalstidende, Copenhagen

July 21, LII, No. 29, pp. 897-928

137 Advantages of Transverse Incision for Laparotomy. (Pfannenstiels Tværincision.) E. Wanscher.

July 28, No. 30, pp. 929-960

138 To Remedy Overcrowding in Insane Asylums. (Størrelsen og Arten af Pladsmangelen paa Sindsygeanstalterne, samt Muligheder for dens Afhælpning.) A. T. Jacobsen.

August 4, No. 31, pp. 961-992

139 *Formaldehyd Disinfection without Special Apparatus. L. E. Walbum. Commenced in No. 30.

140 Laryngologic Instruments. (Ringkniv med Fangapparat. Larynxtang.) V. Lange.

August 11, No. 32, pp. 993-1016

141 *The Urine Sediment in Athletes and Nephritics. (Undersögelser over Urinsediment hos Sportsmænd og Nefritikere.) H. B. Christensen.

August 25, No. 34, pp. 1049-1080

142 Is Artificial Light Rich in Ultraviolet Rays? (Er vore kunstige Lyskilder riga paa ultraviolette Straaler?) E. S. Johansen.

139. **Formaldehyd Disinfection Without Apparatus.**—Walbum reports a series of comparative tests of various methods of formaldehyd disinfection. The most effectual and the cheapest is with the special disinfecting formaldehyd apparatus, but good results can be obtained with the potassium permanganate-formaldehyd technic, only larger amounts of the chemicals must be used than the directions call for. He found it impossible to obtain satisfactory results until he increased the amounts to 3.3 kg. potassium permanganate, 3.3 liters formalin and 3.3 liters water for each 100 cubic meters. Disinfection of passenger cars and hacks was one of his aims, and he describes the methods found most convenient. Strips of paper pasted along the crevices left unsightly marks, but it proved feasible to plug the crevices around doors and windows with cotton and the ventilators with cushions filled with cotton, while a special device closed the water-closets air-tight and permitted them to be filled to the top with a disinfecting fluid. The upholstery absorbs so much of the fumes that unusually large amounts are required. It was found possible to disinfect a hack in fifteen minutes with 500 gm. each of the permanganate, formalin and water, after doors and windows had been plugged with moist cotton. Staphylococci, diphtheria and typhoid bacilli were thus destroyed in the tests. After fifteen minutes the doors of the hack were opened and after five more minutes the zinc vessel holding the mixture was removed and another introduced containing 1.5 kg. of slaked lime in small pieces over which was poured a hot solution of 250 gm. of ammonium chlorid in 500 gm. boiling water. The doors of the hack were then closed again for fifteen minutes, after which the vessel was removed, the doors thrown open, and the vehicle was again ready for use in an hour or hour and a half. Full descriptions are given of the different tests and methods used.

141. **The Urine Sediment in Nephritis and After Sports.**—Christensen gives the tabulated details respecting the urine findings in 10 football players, 12 wrestlers, 27 athletes after their exercises, and a number of others—all showing that the urine sediment after these exertions resembles the sediment in severe nephritis. Half an hour's wrestling by a robust and healthy individual will bring fat into the sediment of the urine just as is observed in chronic nephritis, but evidently it is merely the result of the changes induced in the circulation by the violent exercise.

Ugeskrift for Læger, Copenhagen

August 19, LXXI, No. 33, pp. 933-954

143 Eye Diseases Occasioned by Nephritis. (Øjenlidelser foraarsagede af Nefritis.) C. F. Heerfordt. Commenced in No. 32.

August 26, No. 34, pp. 955-976

144 *Hypertrophy of the Heart in Nephritis. (Hjertehypertrofien ved Nefritis.) V. Scheel.

144. **Hypertrophy of the Heart in Nephritis.**—Scheel regards it as practically established that the heart hypertrophies in nephritis on account of the changes in the smaller arteries, compelling it to greater efforts. These changes in the arterioles are the result of the action of some still unknown substance circulating in the blood owing to the defective elimination by the kidneys of nitrogenous waste, and it is probably an important factor in the development of arteriosclerosis. Cystic kidney and hydronephrosis, interfering with the elimination through the kidneys, are also frequently accompanied by enlargement of the left ventricle. The substance in question may have some direct action on the heart itself, stimulating it to greater efforts, so that the right ventricle may hypertrophy also. Changes in the myocardium do not play much part in nephritis; as a rule the coronary arteries are not much affected. Death from heart failure is more frequent with secondary than with primary nephritis. In his 27 cases of nephritis after acute glomerulitis, 6 of the patients died from heart failure, while only one fatality from this cause occurred in his 20 cases of contracted kidney. Hypertrophy of the heart was constant in his glomerulitis cases, but was not encountered once in 15 cases of chronic parenchymatous nephritis.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

ANNUAL REPORT OF THE MT. SINAI HOSPITAL OF BOSTON. Seventh Year. Boston, January, 1909. Paper.

PENNSYLVANIA HOSPITAL: ANNUAL REPORT OF THE DEPARTMENT FOR THE INSANE. For the year ending April 22, 1909. Paper. Pp. 36.

MINER'S NEW COMPLETE OBSTETRIC RECORD. Improved Edition. Giving all Medical Data Bearing on the Problem of Heredity. Cloth. Pp. 124. Copyright, 1883, by Joel A. Miner. Ann Arbor, Mich.: Joel A. Miner.

THE GREAT WHITE PLAGUE: Tuberculosis. By Edward O. Otis, M.D., Professor of Pulmonary Diseases and Climatology, Tufts College Medical School. Cloth. Pp. 321. Price, $1.00 net. New York: Thomas Y. Crowell & Co.

MINOR OPHTHALMIC AND AURAL TECHNIQUE. By Alfred Nicholas Murray, M.D., Chicago, Assistant in the Department of Otology and Laryngology, Rush Medical College. Cloth. Pp. 233, with 98 illustrations. Price, $3.00. Chicago: Cleveland Press, 1909.

TEXT-BOOK OF ANATOMY AND PHYSIOLOGY FOR NURSES. Compiled by Diana Clifford Kimber, Graduate of Bellevue Training School. Third Edition, Revised by Carolyn E. Gray, R. N., Assistant Superintendent, New York City Training School for Nurses. Cloth. Pp. 421, with illustrations. Price $2.50. New York: The Macmillan Co., 1909.

A TEXT-BOOK OF PRACTICAL THERAPEUTICS, with Especial Reference to the Application of Remedial Measures to Disease and Their Employment on a Rational Basis. By Hobart Amory Hare, M.D., B.Sc., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Thirteenth Edition. Cloth. Pp. 866, with 122 engravings and 4 colored plates Price, $4.00. Philadelphia: Lea and Febiger, 1909.